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THE EFFECTS OF TWO COURSES, ASSESSMENT AND ADVISEMENT AND CAREER EXPLORATION ON ACADEMIC ORIENTATION, ACADEMIC MOTIVATION, AND LOCUS OF CONTROL IN COMMUNITY COLLEGE STUDENTS

The University of Arizona   PH.D.   1980

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CAREER EXPLORATION ON ACADEMIC ORIENTATION, ACADEMIC

MOTIVATION, AND LOCUS OF CONTROL IN

COMMUNITY COLLEGE STUDENTS

by

Charlie Raymond Mitchell

A Dissertation Submitted to the Faculty of the

DEPARTMENT OF COUNSELING AND GUIDANCE

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

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ACKNOWLEDGMENTS

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ABSTRACT

The purpose of this study was to measure the effects of two courses, Assessment and Advisement for Student Development and Career Exploration, on the academic orientation, academic motivation, and perceived locus of control on community college students. The study explored the correlation between internal locus of control and intrinsic motivation and between academic orientation and intrinsic motivation. Finally, the study tested the difference in academic orientation scores for those students who had and those who had not selected a college major but all of whom had completed the course Assessment and Advisement for Student Development. These two individualized, self-paced courses are taught for credit at Mesa Community College.

The experimental hypotheses were focused around the following research problems. The first question was "Does completion of an individualized study guide in Assessment and Advisement for Student Development affect students' academic orientation, perceived locus of control, or their academic motivation?" The second research question asked, "Does completion of an individualized study guide in career exploration affect students' academic orientation, perceived locus of control, or their academic motivation?" The third question was "Does completion of the course Assessment and

Advisement for Student Development have more effect on academic orientation, perceived locus of control, or academic motivation than completion of the course Career Exploration?" The fourth research question was "What relationships exist between the Academic Orientation scale of the Strong-Campbell Interest Inventory and the Intrinsic Motivation Scale of the Merritt College Motivation Inventory?" The fifth research question asked, "What relationships exist between the Intrinsic Motivation scale of the Merritt College Motivation Inventory and the Rotter Locus of Control Scale?" The sixth research question asked, "Is there a difference in academic orientation scores measured by the Strong-Campbell Interest inventory for students who have and have not selected a college major and have completed the course Assessment and Advisement for Student Development?"

The research designs used included a pretest posttest control group design for questions one, two, and three. A posttest only control group design was used for question six. A correlational study was done with questions four and five using pretest scores. The experimental condition was made up of eighty-four new student volunteers randomly assigned to two experimental groups and a control group. One group participated in the course Assessment and Advisement for Student Development, the second group participated

in the course Career Exploration, and group three was the control group.

The instruments used to measure the dependent variables were: The Merritt College Motivation Inventory, the Strong-Campbell Interest Inventory, and the Rotter Locus of Control Scale. The results of a t test for non-independent means revealed that Assessment and Advisement for Student Development did not significantly affect academic orientation scores but did increase intrinsic motivation and internal locus of control and decreased goal deficiency. Results of a t test for non-independent means revealed that Career Exploration significantly increased academic orientation, intrinsic motivation, self-enhancement, and internal locus of control. A t test for dependent means indicated that there was not a statistically significant difference in the effects of the two treatment groups. A Pearson Product-moment Correlation Coefficient was computed and an r test of significance was used to determine that there was a significant linear relationship between intrinsic motivation and academic orientation and between intrinsic motivation and internal locus of control.

CHAPTER I

INTRODUCTION

The major purpose of this study was to determine the
effects of two individualized instruction courses on
academic orientation, academic motivation, and perceived
locus of control on new students at Mesa Community College.
The two courses were: Assessment and Advisement for Student
Development and Career Exploration. Also studied was the
relationship between the Academic Orientation scale of the
Strong-Campbell Interest Inventory and the Merritt College
Motivation Inventory. The study examined the relationships
between the Intrinsic Motivation scale of the Merritt
College Motivation Inventory and the Rotter Locus of
Control Scale, and the relationship between the Intrinsic
Motication Scale, and the Academic Orientation Scale of the
Strong-Campbell Interest Inventory. The study also examined
the difference in Academic Orientation scores on the Strong-
Campbell Interest Inventory for students who have and who
have not selected a college major but who have completed the
course Assessment and Advisement for Student Development.

More specifically the research problems were as
follows:

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1. Does completion of an individualized study guide in Assessment and Advisement for Student Development affect students' academic orientation, perceived locus of control, or their academic motivation?

2. Does completion of an individualized study guide in Career Exploration affect students' academic orientation, perceived locus of control, or their academic motivation?

3. Does completion of the course Advisement and Assessment for Student Development have more effect on academic orientation, perceived locus of control, or academic motivation than completion of the course Career Exploration?

4. What relationships exist between the Academic Orientation scale of the Strong-Campbell Interest Inventory and the Intrinsic Motivation Scale of the Merritt College Motivation Inventory.

5. What relationships exist between the Intrinsic Motication Scale of the Merritt College Motivational Inventory and the Rotter Locus of Control Scale?

6. Is there a difference in Academic Orientation scores measured by the Strong-Campbell Interest Inventory for students who have and who have not selected a college major but who have completed the course Assessment and Advisement for Student Development?

The chapter is organized in the following order:
(1) Introduction, (2) Rationale for the Study, (3) Need for
the Study, (4) Definitions, (5) Presentation of the Research
Hypotheses, (6) Delimitations, and (7) Summary.

Rationale for the Study

The primary objective of college counseling and
guidance is to help students get the most out of their
college experience. Counseling and guidance services help
students make career decisions as well as help them select
a major which would allow them to achieve their career goals.
Furthermore, college counselors provide students with
assistance in making other academic and personal decisions.
These decisions make students' coursework meaningful and
relevant to their individual needs and goals. Counseling
decreases the likelihood that students will withdraw from
college and increases the likelihood that they will benefit
from and have positive feelings about college (Kaye, 1972).
In short, counseling might insure that the proverbial "open
door" does not become a "revolving door" (Cross, 1971).

The tremendous influx in both numbers and variety
of students attending the community college in the last
decade makes the counseling and guidance services, delivered
through the Human Development Curriculum, an extremely
important part of the educational process.

"Human Development is a patterned, orderly, lifelong process leading to growth or self-determination and self-direction, which results in more effective behavior" (O'Banion, 1975, p. 78). The Human Development Curriculum affirms the philosophical prospective that, in the community college, cognitive mastery of knowledge can be integrated with the social development of students. Self-direction and self-determination can be best facilitated when both cognitive and social development are considered essential to the educational process (Mitchell, 1978b).

An investigation by Wessell, Engle, and Smidchens (1978) recommended to educators desiring to reduce unwarranted attrition that they extend their efforts beyond attempts to make better that which already exists. The findings encouraged educators to develop programs designed to instill early and tentative commitment and direction to entering students. While they suggested that students who desire assistance in making decisions be aided, they added that students not feeling the need to make tentative commitments and decisions also be assisted (forced, cajoled, encouraged) to do so. Toward this end, and supported by of their research concerning the relationship between decidedness and retention, Wessell et al. (1978, p. 31) advanced the following principles concerning choice and commitment:

PRINCIPLE 1: The process of choosing among college alternatives is a part of the process of being a student. Through encouraging (requiring) early tentative choices based upon accurate information and self-exploration, students can be made more conscious of their purpose in being a student. Early participation by the student in the process of evaluating and testing a tentative decision is a necessary first step in refining those commitments and establishing personal direction.

PRINCIPLE 2: Deciding among various college options is based upon accurate information about alternatives; choosing to decide (preparation for the decision-making process), on-the-other-hand, is based upon internal and/or external expectations for choice. With accurate information most students can make tentative commitments if the following conditions exist: (a) expectations for choice exist; (b) accurate information about alternatives is available; (c) tentative choices are viewed as tentative and ample opportunity for revision is permitted.

PRINCIPLE 3: Commitment to a choice is the necessary first step in affirming that choice. Commitment to a curricular direction gives the student personal support and leads to persistence.

PRINCIPLE 4: Undecided students need information about themselves and the options; indecisive students need to feel a need for decision-making and tentative choices.

Dudley and Tiedeman (1977) believe that through the process of requiring students to express tentative choices, educational institutions can create the necessary opportunity for self-discovery and self-expression. Through this process, persons have the opportunity to put into words the concept of who and what they are. The choice makes it possible to assume an identity role related to college and to test the reality of a construct of self within the

educational environment. Consequently, educators cause
students to consciously construct their concept of who and
what they are by forcing them to make decisions. A decision
about a curriculum to follow can be viewed as the central
construct which provides the direction for instrumental
educational activities. It can provide the language by
which an individual accommodates the educational environment
in a manner that fits his/her needs for purpose, goals,
identity, and association.

Kelly (1955) suggested that educational institu-
tions can provide for the development of persistence and
success among students by providing the necessary experiences
to promote general educational planning, to provide direction
of one's energy, and by forcing commitment to educational
goals.

In 1977 Mitchell and Young evaluated the need for
and the degree of utilization of the total student services
program at Mesa Community College. They concluded that
students expressed needs for pre-college advisement,
financial aid services, student activities, personal
counseling, placement services, career counseling, tutoring,
child care, veterans services, and legal services. However,
their findings suggested that the per cent of students
utilizing the services was much less than the per cent
responding that there was a need. Nonetheless, it was their
observation that the counseling services were being used at

their maximum capacity and that a higher per cent of student utilization would require hiring additional professional staff members. They further concluded, however, that the current budgetary concerns of the college district would exclude the possibility of hiring additional professional staff members to satisfy the reported increased demand for services. To resolve the dilemma, they suggested that it was necessary to consider alternative ways of delivering student services (Mitchell and Young, 1979).

As a result of the student needs survey's recommendations an individualized, self-paced student development course was developed by Mitchell in the fall of 1978. The course orients students to the campus and requires them to visit student services and other campus resources available to them. The course, Assessment and Advisement for Student Development (AA 100) is a course designed to accomplish what O'Banion (1975), Wessell et al. (1978), Dudley and Tiedeman (1977), and Kelly (1955) suggest by having students specify why they are in college, state how being in college is related to their values, do a self-assessment, take placement tests, plan their work week, and turn broad educational goals into specific educational objectives. Over 1500 students completed the course in 1978-79.

As a result of the popularity of the first student development course at Mesa Community College, Welsh and Mitchell (1979) decided to expand the individualized

instruction, student development offerings. With the completion of the text, Career Exploration: An Individualized Planning Guide (CO 102), an individualized career course was offered in the Spring of 1979. Approximately 200 students enrolled for the course which explores career values, interests, work orientation, skills, job satisfiers, and systematic career exploration. The course concludes with students identifying three tentative career choices. The course goals are to familiarize students with the process of career exploration and to assist them in making a reasonable career choice based on self-knowledge, accurate information about the world of work, and an understanding of the career search process.

It is important to the instructional program as well as to the student services program at Mesa Community College that the impact of the two individualized student development courses; Assessment and Advisement for Student Development, AA 100, and Career Exploration, CO 102, be assessed. This study will determine the effects of the courses on student motivation, academic orientation, and perceived locus of control. It is also of academic interest to the researcher to discover whether specifying educational objectives and plans (AA 100) has greater effect on students' academic orientation, academic motivation, and locus of control than selecting a career (CO 102).

Definitions

1. AA 100 is Assessment and Advisement for Student
   Development, a self-paced, individualized instruc-
   tion course.

2. Academic Orientation is a scale on the Strong-
   Campbell Interest Inventory and measures probable
   persistence in an academic setting (Stewart, 1958).
   High scores are found among people who are well
   educated or intend to become so; low scores are
   found among those who are uncomfortable in academic
   settings and who find intellectual exercises a bit
   of a bore.

3. AOR is the Academic Orientation scale of the Strong-
   Campbell Interest Inventory.

4. CO 102 is a self-paced, individualized instruction
   course named Career Exploration.

5. GD is Goal Deficiency, a scale on the Merritt
   College Motivation Inventory.

6. Human Development is a patterned, orderly, lifelong
   process leading to growth or self-determination and
   self-direction, which results in more effective
   behavior.

7. The Human Development Curriculum is concerned with
   the creation of a specific, separate set of courses
   for the purpose of increasing students' personal
   development. The human development curriculum

explicitly makes emotional and personal development the primary object of a separate distinctive curriculum.

8. IM is Intrinsic Motivation, a scale on the Merritt College Motivation Inventory.

9. The Locus of Control Construct has been defined as the degree to which individuals perceive that reinforcements are contingent upon their own behavior or attitudes, versus the degree to which they believe that reinforcements are contingent on forces external to themselves or occur independently of their own actions.

10. PO is Person Orientation, a scale on the Merritt College Motivation Inventory.

11. Psychological education has been defined as a systematic set of educational experiences designed to affect personal, interpersonal, ethical, aesthetic, and philosophical development in adolescents and young adults and is oriented to primary mental health prevention.

12. SE is Self-Enhancement, a scale on the Merritt College Motivation Inventory.

Research Hypotheses

The following hypotheses will be tested at the .05 level of significance. They are stated in null form.

1. Hypothesis 1.01: For the group that completed
    AA 100, experimental group one, there is no
    significant mean change in academic orientation as
    measured by the Strong-Campbell Interest Inventory
    as a result of completing the course.

2. Hypothesis 1.02: For the group that completed
    AA 100, experimental group one, there is no
    significant mean change in locus of control as
    measured by the Rotter Locus of Control Scale as a
    result of completing the course.

3. Hypothesis 1.03: For the group that completed
    AA 100, experimental group one, there is no
    significant mean change in (a) intrinsic motivation,
    (b) person orientation, (c) self-enhancement, or
    (d) goal-deficiency as measured by the Merritt
    College Motivation Inventory as a result of
    completing the course.

4. Hypothesis 2.01: For the group that completed
    CO 102, experimental group two, there is no
    significant mean change in academic orientation
    scores as a result of completing the course.

5. Hypothesis 2.02: For the group that completed
    CO 102, experimental group two, there is no
    significant mean change in locus of control
    measured by the Rotter Locus of Control Scale as a
    result of completing the course.

6. Hypothesis 2.03: For the group that completed CO 102, experimental group two, there is no significant mean change in (a) intrinsic motivation, (b) person-orientation, (c) self-enhancement, or (d) goal-deficiency as measured by the Merritt College Motivation Inventory as a result of completing the course.

7. Hypothesis 3.01: There is no significant difference in academic orientation scores measured by the Strong-Campbell Interest Inventory for those students who complete the course Assessment and Advisement and those who complete the course Career Exploration.

8. Hypothesis 3.02: There is no significant difference in locus of control measured by the Rotter Locus Control Scale for those students who complete the course Assessment and Advisement and those who complete the course Career Exploration.

9. Hypothesis 3.03: There is no significant difference in (a) intrinsic motivation, (b) person-orientation, (c) self-enhancement, or (d) goal-deficiency as measured by the Merritt College Motivation Inventory for those students who complete the course AA 100 and those students who complete the course CO 102.

10. Hypothesis 4.01: There are no significant linear correlations between academic orientation scores on the Strong-Campbell Interest Inventory and Intrinsic Motivation Scores on the Merritt College Motivation Inventory.

11. Hypothesis 5.01: There is no significant linear correlation between the Intrinsic Motivation scores on the Merritt College Motivation Inventory and the Rotter Locus of Control scores.

12. Hypothesis 6.01: There are no significant differences in academic orientation scores as measured by the Strong-Campbell Interest Inventory for students who have and who have not selected a college major but who have completed the course Assessment and Advisement for Student Development.

Delimitations

The following are recognized limitations of the study.

1. No atempt was made to stratify the sample based on known predictors of academic orientation and motivation. Examples include age, major field of study, high school grades, etc.

2. Both Assessment and Advisement and Career Exploration are comprised of several units some of which have more impact on the dependent variables than

others. No attempt was made to dissect the courses
to determine which unit had the most influence on
the dependent variables.

3. The results should be generalized with caution
beyond the population from which the sample was
drawn.

Summary

This chapter stated the basic purpose of the study.
The purpose of the study was to measure the effects of two
courses, Assessment and Advisement and Career Exploration,
on the academic orientation, academic motivation, and
perceived locus of control in community college students.
The study further explores the linear correlation between
locus of control and intrinsic motivation. Finally, the
study will explore the difference in academic orientation
scores for students who have and who have not completed the
course Assessment and Advisement for Student Development.

The chapter defines the purpose of and the need for
a student development curriculum as well as the need for new
methods of delivering student development instruction. The
history and development of the two courses used as the
independent variables for the experiment were discussed.

The research hypotheses were stated and the study's
limitations and definitions were given.

CHAPTER II

REVIEW OF THE LITERATURE

During the last decade several significant changes
have occurred in college counseling and student development
centers. There has been a move away from viewing the
counseling center as primarily a mental health agency to a
broader concept of a student development center which
includes psychological or affective education in a group or
classroom setting. The new orientation is one of student
growth rather than remediation of problem behavior. The
two courses, AA 100 and CO 102, reflect this newer orienta-
tion. The concept of psychological education or student
development education will be defined and reviewed in this
chapter.

Psychological Education

Psychological education has been defined as a
systematic set of educational experiences designed to affect
personal, interpersonal, ethical, aesthetic, and philosophi-
cal development in adolescents and young adults and is
oriented to primary mental health prevention (Sprinthall and
Mosher, 1970). The focus of such a program is of educa-
tional and personal developmental nature rather than of
remedial intervention. The objective of psychological

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education is to affect, by education, the course of personal development rather than providing therapy or counseling in a reactive manner. Personal development is concerned with those tasks which arise at certain periods in the lives of students, the successful achievement of which leads to maturation and subsequent success in later periods of life. An example of a developmental task is the development of a capacity for close interpersonal relationships or true intimacy in late adolescence (Erikson, 1968).

Most pertinent for this study are the findings related to higher education institutions and their impact on students. Chickering (1969) discussed seven major dimensions of student development during the college years. These seven developmental areas are intellectual competence, management of emotions, development of personal autonomy, identity formation, competency in interpersonal relationships, development of a sense of purpose, and acquisition of personal integrity. Chickering suggests that most higher education curricula could be improved substantially to contribute to the enhancement of all but the cognitive dimension of student development. Heath (1968) said that the college experience provides values which are central to students' personal identity organization. Heath also sees the interaction of academics and social relationships as instrumental in the development of students' value systems and proposes that students' social and emotional development

be given the degree of explicit attention afforded to academic affairs.

Reisman, Gusfield, and Gamson (1970) explored some of the central issues behind student uprisings, administration upheaval, and faculty discontent during the late sixties and early seventies. Two public, non-residential colleges were selected as representative settings of a growing trend toward mass higher education. Two major findings were reported. A majority of students at these institutions described themselves as alienated from the intellectual and academic values espoused by the faculties and administrations. In addition, these institutions were reported to be negligent in their attempts to deal with social development and emotional concerns of students.

Whitaker (1971) studied indicators of a student population identified as the "intellectual, non-conformist, collegiate drop-out." The student drop-out was found to have undergone a period of prolonged stressful adjustment to the social and developmental reality present in late adolescence-early adulthood. There was no evidence of vocational interest or choice for drop-out students. Finally, drop-out students were disillusioned with academic values and practices. Whitaker (1971) urged colleges to take a more proactive approach to the student drop-out problem by providing outreach services for those students.

Withey, Wittes, and Havelock (1971) sought to
explore a diverse set of correlates to provide some indica-
tion of colleges' impact on the students and greater
society. The study explored colleges' impact on student
values, political behavior, interpersonal relationships,
prejudices, career outlook, and life style. Changes that
occurred during the college experience as well as the
longitudinal effects resulting from college life were
examined. Some of the major findings of the Withey et al.
study include the observation that much of the effects of
college are the result of more informal processes rather
than the formal institutional structure. They also found
that a good deal of training is necessary after graduation
in order to insure career stability. Withey et al. stress
the need for higher education institutions to take a more
active role in helping students develop healthy interpersonal
relationships as well as providing more pragmatic experi-
ences and training to assure a smoother transition to the
world of work (Withey et al., 1971).

A Review of Human Development Programs

There have been numerous attempts to "humanize"
school curriculums through approaches bearing labels such
as "humanistic," "affective," or "confluent." The humanistic
view is based on the claim that heretofore the emphasis in
American schools has been almost entirely on the cognitive

domain. Humanistic educators are attempting to equalize the disproportionate curriculums by integrating courses and experiences from the affective and psychomotor domains. The humanistic approach stresses more individual freedom for students to discover their own resources and interests (Borton, 1970; Greer and Rubenstein, 1972; Jones, 1969; Lyon, 1970).

Affective education is similar to the humanistic approach except more emphasis is placed on contact and expression of emotions (Rogers, 1970; Peterson, 1969). Confluent education, an approach developed by Brown (1969), is aimed at the education of students in both the affective and the cognitive domains. Brown's primary emphasis is on encouraging students to discover their potential and to take responsibility for their own development, recognizing the teacher as one of several resources.

Sprinthall and Mosher (1970) have described how human development education differs from other developmental approaches. They suggest that human development education attempts to make personal development the primary objective of a curriculum instead of adding to existing courses or incorporating experiential exercises within ongoing classes. Human Development education is concerned with the creation of a specific, separate set of courses for purposes of increasing students' personal development (Sprinthall and Mosher, 1970). Instead of "humanizing" existing school

curriculums by inclusion of material from the affective or psychomotor domains and thus furthering the possibility of increasing students' emotional and personal growth, human development education explicitly makes emotional and personal development the primary objectives of a separate, distinctive curriculum.

Higher education models of psychological education programs can be traced to two sources: community mental health and counseling center outreach efforts. At least two psychological education programs have been constructed with a community mental health orientation. Bloom (1971) describes a preventative mental health program for university freshmen. The goals of this program were the development of greater emotional maturity, more successful adaptation to college, less psychological disability, and fewer drop-outs. Bloom's program encompassed diagnostic testing, on-going counseling groups in residence halls, and courses in psychology which combine theoretical and applied principles. The courses offered students experiences in sensitivity training, personality theory, and other related topics.

Reid (1970) proposed a community mental health model as an approach to deal with student mental health problems. Reid's three-stage model focused on the following aspects of student mental health: primary prevention efforts were directed toward identifying and correcting harmful circumstances and educational experiences, secondary prevention

programs focused on early diagnosis and treatment. One of
the primary prevention procedures suggested by Reid was
courses offered by the college to assist students in
developing greater self-confidence in interpersonal rela-
tionships.

The majority of psychological or human development
education programs have been constructed and implemented by
counseling service personnel. Recent reviews of the field
of counseling (Layton, Sandeen, and Baker, 1971; Mitchell,
1978b) suggest that counselors and counseling personnel are
changing from giving their attention to remediation and
therapy to student development. Such efforts include: out-
reach counseling services, on-going drop-in "rap" groups,
student paraprofessional counselor training, large-scale
microlabs, individualized instruction courses, and courses
in personal and career development (Layton et al., 1971;
Mitchell, 1978b).

Drum and Figler (1973) have developed a model for
counselors to apply in a college setting to promote personal
development and prevent emotional disturbance in students.
Drum and Figler delineate the present limitations of many
counselors as student program planning, counseling students
after a crises has occurred, and generally being on the
periphery of the college experience. Programs suggested to
improve counselor effectiveness include peer counselor run
counseling programs, sensitivity training groups in

dormitories and other student living environments, counselors acting as consultants to administration and faculty, and counselors teaching courses aimed at enhancing students' personal and career development (Drum and Figler, 1973).

One of the more innovative approaches was suggested by Foulds and Guinan (1969) who proposed changing the college counseling center from a crisis center to a growth center. To accomplish this change of orientation, Foulds and Guinan have conducted large-scale microlab sessions, led marathon encounter groups on selected weekends, and offered courses on personal and career development.

Morrill and Hurst (1971), elaborating on the work of Oetting (1967), developed a psychological education program grounded in learning theory and behavioral psychology. This model emphasized replacing behavioral deficits by facilitating the acquisition of appropriate skills. Psychological education courses focus on various areas of the students' behavioral repertoire which need improvement. Counselors teach students the necessary behavioral skills prerequisite to the student's full utilization of that aspect of the environment. Primary instructional techniques are modeling, behavioral rehearsal, and positive reinforcement (Morrill and Hurst, 1971). Many counselors and counseling centers have become dissatisfied with the traditional remedial role and are not adopting

similar out-reach and personal development programs (Boy and Pine, 1969; E. Levy, 1969; Lipsman, 1969; Mullens, 1972; Vincent, 1973; Nidorf, 1970; Winter, 1970).

There have been two human development education models developed specifically for the two-year community college population. Community college students possess some unique characteristics which set them apart from four-year students. These characteristics make human development education especially relevant. Specifically, the two-year college student is faced with a more urgent need to plan and choose a career due to the occupational nature of many of the community college programs. Also, there is evidence which suggests that many two-year college students have low levels of self-esteem often associated with perceived lower status than their four-year contemporaries.

One Psychological Education Program was developed by R. Levy (1969, 1972). R. Levy (1969) constructed a course consisting of interlocking exercises using human relations training, Gestalt therapy, and self-disclosure principles and techniques. Levy's experiential approach to personal development attempts to increase students' self-esteem as well as to help students develop confidence in their inter-personal relationships. Levy has proposed separate courses in sensitivity-human relations training, understanding, and expression of the "inner self," and peer counseling, crisis intervention techniques (R. Levy, 1972). At this point,

Levy has produced no empirical evidence as to the effective-
ness of his program.

The other psychological education model designed
specifically for the community college student is the Human
Potential Seminar developed by the Kendall College counsel-
ing center staff. The Human Potential Seminar was one of a
series of courses offered by the Human Services Department
at Tompkins-Corland Community College. The staff of the
Human Services Department was desirous of broadening the
scope of its counseling program through a psychological
education approach. The goals of the Human Services
Department staff established for a psychological education
program included: an increase in students' feelings of
personal control over their environment movement toward
internal locus of control, improvement in students' inter-
personal relations, and an improvement in students'
vocational decision making. The Human Potential Seminar
seemed particularly appropriate as its primary objectives
were improvements in participants' self-esteem, self-
determination, and decision making ability. To date there
have been no empirically evaluated results of the Human
Potential Seminar's effectiveness in meeting its stated
objectives.

Summary

During the last decade the traditional college counseling center has been evolving into a student development center which, along with the counseling and guidance services, offers student development courses. The researcher reviewed the literature expressing the need for and development of psychological education or student development education. Conclusions were drawn by several studies regarding the effects of such programs on students.

The humanistic view, affective education, and confluent education were described and compared with a human development model. The mental health model was compared with programs developed in a college student personnel setting. The literature reflects a shift from the college counseling center being a crisis center to a growth center which includes large scale microlab sessions, encounter groups, and courses on personal and career development.

Two human development education models developed specifically for two-year community college populations were reviewed. The current study was an effort to study the effects of two student development courses on academic orientation, locus of control, and motivation in community college student.

CHAPTER III

PROCEDURES

This chapter will include a description of the setting and population from which the sample was drawn. Procedures used for sampling and data gathering will be given. The research design and experimental variables will be described. Description of the instruments, experimental treatment, teating procedures and data collection, and analysis of the data will be included.

Subject Selection and Sampling Procedures

Letters of invitation to participate in this research were mailed to 800 randomly selected people who applied for admission to Mesa Community College for the fall, 1979-80, semester. From the pool of volunteers responding to the letter of invitation, eighty-four persons were randomly selected to participate in the experiment, and randomly assigned to one of three groups. There were 28 subjects in each group. The nature, demands, risks, and benefits of participating in the research was thoroughly explained to each participant.

Research Design and Variables

The research design was the Pretest-Posttest Control Group Design (Campbell and Stanley, 1963). This design controls for most internal sources of invalidity and is one of the three basic designs recommended in the methodological literature. The Pretest-Posttest Control Group Design is most appropriately used for measuring differential treatment effect, i.e., whether or not something is better than something else. Measuring differential treatment effect is the goal of this study.

The independent variables were two courses: Advisement and Assessment for Student Development, used in experimental group one, and Career Exploration, used in experimental group two. The dependent variables were Academic Orientation measured by the Strong-Campbell Interest Inventory, locus of control measured by the Rotter Locus of Control Scale, and Intrinsic Motivation, Self-Enhancement, Person Orientation, and Goal Deficiency measured by the Merritt College Motivation Inventory.

Treatment

There were two experimental groups and one control group comprised of 28 subjects each. The three groups received treatment as follows:

1. Group 1. Participants were required to complete Assessment and Advisement for Student Development, a

self-paced college course. In order to complete the course materials (Appendix B) students were required to (a) take a general campus tour and have a campus orientation, (b) assess their personal and academic skills, (c) understand the relationship between career choice and college coursework, and (d) design a plan of action for subsequent course work.

2. Group 2. Participants were required to complete Career Exploration, a self-paced college course. In order to complete the course materials (Appendix C), they were required to (a) examine a list of personal values and determine how they are reflected in a career choice; (b) list personal interests and define how they are consistent with a career selection; (c) state the relative importance of work orientation concerning data, people, and things; (d) prepare a list of skills that they would like to market; (e) identify a list of job satisfiers that they want from a career; (f) explore accurate information about selected careers; and (g) identify three top career choices.

3. Group 3. Group number three received no treatment. This group was the control or comparison group. For participating in the experiment, the control group received one semester hour of credit for the course CO 102, Self Assessment With Tests.

Description of the Instruments

The Rotter Locus of Control Scale (Rotter, 1966) affords a measure of locus of control of self-determination. The LOCUS is a 23 dichotomous item questionnaire with six dichotomous filler terms. A subject is rated on the LOCUS as either external (views events as beyond own control) or internal (views events as being under personal control). Movement on the scale may occur toward internality or externality.

Reliability studies on the LOCUS have consistently reported test-retest correlations in the .70s and .80s (Harrow and Ferrante, 1969; Hersch and Scheibe, 1967; Joe, 1971; MacDonald, 1971; Rotter, 1966). The validity of the LOCUS has been well documented by various sources. A number of studies (Dies, 1968; Rotter, 1966) have shown that a projective measure of the Locus of Control construct demonstrated positive relationship with correlations in the .60s and .70s. Wall (1970) found no relationship between locus of control orientation as measured by the Rotter scale and self-actualization. Simmons (1973) found no significant relationship between the Identity Achievement Scale and the LOCUS. Segal and Mayfield (1973) found a significant rela-tionship between self-reported anxiety and the LOCUS for subjects who participated in the angle matching task. Externals who failed were lower in anxiety than externals who succeeded. Balch and Ross (1974) found significant

positive relationships between subjects' internal scores on the LOCUS and both completion and success in a behaviorally oriented weight reduction program. Foster and Gade (1973) Reported that while internals had a significantly higher G.P.A. than externals, there were no significant interaction effects between vocational interest patterns and locus of control. Similarly, Warehine (1972) found that freshman males who scored high on internality of the LOCUS had significantly higher G.P.A.s than those oriented toward externality. Mirels (1970) identified two factors which the LOCUS appeared to measure: amount of control an individual believes he/she has over his/her own life, and the extent to which one believes the individual citizen can exert control over political and world affairs. However, Joe (1971) reported that studies of the interaction between the LOCUS and social desirability are contradictory, with some studies finding significant relationships.

The concept of self-determination has been success-fully defined by the locus of control construct (Dua, 1970; Gottesfield and Dozier, 1966; Joe, 1971; MacDonald, 1971). The locus of control construct has been defined as the degree to which individuals perceive that reinforcements are contingent upon their own behavior or attributes, versus the degree to which they believe that reinforcements are contingent on forces external to themselves or occur independently of their own actions (Rotter, 1966). A belief

in external control occurs when persons perceive a reinforcement as not being entirely contingent upon their own action, but rather as the result of chance, luck, or fate, or as under the control of powerful others or unpredictable outside forces. Internal control occurs when individuals perceive a reinforcement as being contingent on their own behavior or their own attributes (Rotter, 1966). Individuals are generally classified as externals or internals depending on whether they believe in external or internal control of reinforcements. Persons who believe that events in their lives are largely self-determined would be classified as internals.

Although the trait or state status of the locus of control construct remains undecided (Alker, 1973), there is considerable evidence to suggest that the state differentiation has validity (Berger and Koocher, 1972; Dua, 1970; Joe, 1971; Leeb, Fahrion, French, and Thomas, 1974; MacDonald, 1971; Throop and MacDonald, 1971). The trait construct refers to a persisting characteristic or dimension of personality according to which individuals can be measured. The state construct refers to a more transitory period during which a person may experience specific feelings, attitudes, thoughts, etc. (Hilgard, Atkinson, and Atkinson, 1971).

Numerous investigators have demonstrated a relationship between internal-external control and adjustment

(Crego, 1970; Joe, 1971; Lamont, 1972; Platt and Eisenman, 1968). Several investigators have reported pathological populations as having higher external scores than normal populations (Bialer, 1961; Joe, 1971; Shybut, 1968; Smith, Pryor, and Distefuno, 1971). Other investigators have demonstrated relationships between anxiety and externality (Segal and Mayfield, 1973; Watson, 1967); depression and externality (Lamont, 1972); and neuroticism and externality (Platt, Pomeranz, and Eisenman, 1971).

There have been a variety of investigations dealing with change in locus of control as a result of some type of intervention (Berger and Koocher, 1972; Dua, 1970; Smith, 1970; Gottesfield and Dozer, 1966; Hunt and Hardt, 1969; Leeb et al., 1974; Masters, 1970; MacDonald, 1971; Nowicki and Barnes, 1973; Shybut, 1968).

Three studies having most similarity to the present investigation examined the effects of an achievement motivation training course (Alschuler, Tabor, and McIntyre, 1970) on community college students' locus of control. Reimanin (1970a, 1970b) administered the Rotter I-E scale to two separate groups. One group consisted of eighty-six students who had voluntarily enrolled in sections of an achievement motivation course taught on two weekends during the fall semester. Ninety randomly selected regular students made up the control component for this group. The second group was made up of 151 "high-risk" students

enrolled in six classes of achievement motivation training during a one-week summer session prior to matriculation in the fall. Forty-four "high-risk" students who either refused to participate or were not invited to participate served as the control group. Pre- posttest differences revealed a significant increase toward internal control for both the first group of students and the "high-risk" students upon completion of the achievement motivation courses. Furthermore, a significant increase remained for the "high-risk" group after two months. This change toward internality persisted for twenty male "high-risk" students after seven months; however, eight female "high-risk" students demonstrated a regression toward externality. Neither control group showed significant changes in locus of control.

Haines (1972) administered the Rotter I-E scale to 64 community college students enrolled in five sections of an achievement motivation course during the fall, 1971 semester, and to 23 general studies students unable to enroll in any of the sections who served as a control group. The experimental and control groups were compared on five demographic variables and on the basis of initial I-E scores as a measure of the similarity of the two groups at the pretest, and that the experimental group had a significant change toward internal control. The control group had no significant change toward internality.

However, the difference found in the experimental condition was not significantly greater than that of the control.

Both the Reimanis and the Haines studies demonstrate change toward internality for their subjects. However, these studies are methodologically weak in that the subjects involved were not randomly assigned to the experimental and control conditions. Unfortunately, this situation reduces the validity of their findings and prevents generalization beyond the specific subjects involved (Campbell and Stanley, 1963).

The Strong-Campbell Interest Inventory is an instrument which measures vocational interest and has a special scale, the Academic Orientation scale, that the researcher used in this study. The Academic Orientation Scale (AOR) was constructed by comparing the item responses of good and poor students at the University of Minnesota's College of Science, Literature, and the Arts. Detailed descriptions of the construction of the scale can be found in the Handbook for the SCIV (Campbell, 1971).

The Academic Orientation scale used to be labeled Academic Achievement (AACH); the new title is more accurate, for the scale is not a good predictor of grades, but rather a measure of probable persistence in an academic setting (Stewart, 1958). The new AOR scale was developed by using items from the earlier men's and women's forms of the scales, but the new items were restricted to those that there

included in both the men's and women's booklets. This was done so that the new AOR scale could be used to score existing samples that had been tested on either of the older inventories to determine scale characteristics. The scale was not renormed by going back to the original samples. Instead the scale was normed by using occupational samples with known mean scores on the earlier scale; the conversion was arranged so that the sample had the same score on the new scale.

AOR scale validity indicates that persons desiring occupations that require a high level of academic training--psychologists, chemists, psychiatrists, mathematicians--score the highest in the 1973 general reference samples. At the bottom of the distribution, with means more than three standard deviations lower, were occupational samples with much lower requisite educational levels--farmers, beauticians, sewing machine operators, and realtors. When occupations such as these are spread apart by three standard deviations, the scale is clearly related to educational level. However, Campbell and Johansson (1966) found the scale to be not a measure of ability, but rather of interests, although interests are probably as important as ability if a student is to persist in college.

Students entering Minnesota junior colleges have mean scores of about 30-35. Freshmen at the University of Minnesota, Pennsylvania State University, and the University

of Massachusetts have average scores of about 40-45.
Students entering the University of California (Berkeley)
and Dartmouth College average about 45-50, and entering
freshmen at Harvard University average 55-60. These are
large differences, and the rank order has some relationship
to the institution chosen. However, the AOR scale shows
only a modest relationship with grades, with correlations
usually ranging between .10 and .30.

AOR scale test-retest reliability over 14 and 30 day
intervals have correlations around .90 with test-retest
means within one point of each other.

Scores on the Academic Orientation scale should be
interpreted as the name implies: as an indication of the
degree of academic orientation of the respondent. High
scorers will be found among people who are well educated
or intend to become so; low scorers will be found among
those who are uncomfortable in academic settings and who
find intellectual exercises a bit of a bore. Most people
with advanced degrees will score fairly high on this scale;
high school dropouts will score quite low. Those who have
dropped out of college will also score low, though not as
low as the high school dropouts.

College and university students who have high scores
on this scale will normally be doing well in school and will
usually report satisfaction with their educational experi-
ence, though there will inevitably be dissatisfaction with

specific factors. In contrast, students with low scores will frequently be doing poorly and will usually be thinking about dropping out of school and looking for outside activities. Their dissatisfaction is generally diffuse and directed toward the entire educational experience.

AOR scores increase about 10 points or one standard deviation during the four years of college. At Minnesota, the average freshman who eventually graduates scores about 40 on entrance to the university and about 50 upon graduation. Consequently, some modification of the scale interpretation should be made, depending upon where the student is in his/her educational progress.

Investigators seem to disagree on the issue of whether the Academic Achievement scale (forerunner of the AOR scale) differentiates between good and poor students. In several previous studies (Rust and Ryan, 1954; Morgan, 1952; Lindsay and Althouse, 1969) found significant positive relationships between the Academic Achievement scale of the Strong Vocational Interest Blank and college achievement. Hewer (1956), Cooper (1954), Long and Perry (1952), Lester (1963), Merritt (1950), and Coblentz (1941) reported negative results. Most studies reveal a slightly positive but very guarded relationship between scores on the Academic Achievement scale and college achievement. It is much clearer that the scale reflects academic interest rather than predicts academic success.

Findings presented by Stewart (1958) indicate that the Academic Achievement scale is potentially useful in selecting those individuals who will continue their education for advanced degrees. If used with caution, the Academic Achievement scale may be useful in identifying junior college students who will transfer to a four-year college or university for further education.

Research by Campbell and Johansson (1966) suggests strongly that increased education is associated with high academic achievement scores but it is not clear which is cause and which is effect. Whether students who have certain interests seek more education or whether increased education changes interests could not be determined. They suggest that the scale may reveal the student's wish to succeed but not necessarily reflect any added effort on his/her part to insure success.

The Merritt College Motivation Inventory is an instrument with three experimental scales for the measure of motivation and a fourth scale which measured goal-deficiency. The four scales are tentatively identified as Intrinsic Motivation, Self-Enhancement, Person Orientation, and Goal Deficiency. Provisional norms, based on 649 females and 650 males were established. Item content and correlates of the scales suggest that the four new experimental scales have special relevance for description and analysis of motivation in relation to work and education.

High scorers on the Intrinsic Motivation scale are effective, intellectually predisposed individuals; they are independent, creative; and, since they seek challenging and ambiguous contexts, their motives are mostly intrinsic. In addition to liking learning for its own sake, they need to involve themselves in cultural, musical, and artistic activities.

Low scores on the Intrinsic Motivation scale mean that the individual is a practical person who prefers stable, action type activities. Since non-intellectual interests are frequently personality components of persons scoring low, economic considerations and other extrinsic rewards of work are important to them. They are likely to be attracted to and succeed in college majors that are more practical than abstract and theoretical.

The Self-Enhancement scale was conceptualized as a scale to measure status (seeking) motivation, the tendency to seek prestige, approval of others, success. High scorers have more than average need for prestige, success, and self-esteem. They are hard-working, appreciative of those things for which they have worked so hard, and likely to finish whatever tasks they undertake. They are robust, "socialized" individuals who are free from somatic complaints and feelings of social alienation. Very high scorers, through a somewhat rigid conformance, will persist in

situations (except where independence or autonomy is favored behavior) until they have attained their goals.

Low scorers care little on conventional grounds about the esteem of others. Very low scorers, in fact, are rebellious and have a tendency toward non-conformity. Low scorers admit to feelings of depression and anxiety. They often act carelessly and impulsively. Their achievement mode, in contrast to the high scorer, is more likely to be (though often not "strong") via independence rather than via conformance.

The person-orientation scale strongly reflects a lack of interpersonal problems. High scorers on this scale are socially-effective, person-directed individuals. They are at ease in social situations: they are not bashful or shy when introduced to someone new; they enjoy group activities; they prefer to work with people rather than to work alone. Highs are also socialized persons who have relatively few "problems." They eschew group situations. With respect to the world of work domain, they prefer to work alone rather than to work with others. Low scorers reflect introversion.

The Goal-Deficiency scale reflects many intra-punitive self-defeating aspects of human motivation. High scorers do not manage themselves very well: they are intrapunitive, anxious, and "sensitive." They are incon-sistent in their expression of hostility, lack confidence in

themselves, and quite likely had considerable conflict in their home and family background experiences. Low scorers are persons who are highly motivated, energetic individuals. They assume a somewhat ascendant approach to other people. They deny adjustment problems, feelings of anxiety, or personal inadequacies.

Testing Procedures and Data Collection

Students participating in the research were given the battery of pretests in the Nursing Lecture Hall at Mesa Community College prior to picking up their individualized instruction guides. Students arrived at a time specified in the letter of invitation to participate. Test instructions were read and the tests administered in a group setting. Upon completion of the pretests, experimental groups one and two were given the individualized instruction study guides along with a date by which the materials were to be completed. Since the independent variables used in this experiment were self-paced, individualized instruction courses, the only control to insure equivalent situations for the experimental groups was that all begin at the same time and finish at the same time. This procedure is consistent with the actual procedure used for the courses at Mesa Community College. On the date specified by the researcher, the students returned to submit their completed

study guides and to complete the posttests. The posttests
were administered in the same manner as the pretests.

Data Analysis

A t-test for significant differences between non-
independent means was used to test Hypotheses 1.01, 1.02,
1.03, 2.01, 2.02, and 2.03.

A test of non-independent means was used because the
two sets of scores, pretests and posttests, were derived
from the same sample. A brief review of the procedure
follows:

1. Estimate the population variance of difference
   scores

$$S^2_{\bar{D}} = \frac{N\Sigma D^2 - (\Sigma D)^2}{N(N-1)}$$

   where $D + X_1 - X_2$ for each pair of scores.

2. Estimate the population standard error of the mean
   difference scores

$$S_{\bar{D}} = \sqrt{\frac{S^2_D}{N}}$$

3. Calculate the t ratio for non-independent means

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S_D}$$

For Hypotheses 3.01, 3.02, 3.03, and 6.01 the researcher used a procedure for determining whether or not two experimental groups differed significantly by employing a $\underline{t}$ test of significance for $\underline{independent}$ means. The method was one of "pooling" sums of squares in order to estimate the standard error of the differences between means. The procedure follows:

1. Use the raw score method of determining sums of squares (Σx^2)

$$\Sigma x^2 = \Sigma x^2 - \frac{(\Sigma x)^2}{N}$$

2. Obtain the estimate of common population variance (s^2)

$$s^2 = \frac{x_1^2 + x_2^2}{N_1 + N_2 - 2}$$

3. Estimate the standard error of the differences between means (pooled variance method)

$$s\bar{x}_1 - \bar{x}_2 = \sqrt{\frac{s^2}{N_1} + \frac{s^2}{N_2}}$$

4. Calculate the $\underline{t}$ ratio for independent means

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s\bar{x}_1 - \bar{x}_2} \qquad df = N_1 + N_2 - 2$$

The Pearson Product-moment Coefficient was used to analyze the data generated from Hypotheses 4.01 and 5.01. An r test was employed to determine the level of significance of the coefficient. A complete explanation of both procedures can be found in <u>Statistical Analysis in Psychology and Education</u> (Ferguson, 1969).

Summary

This chapter discussed the procedures involved in the study. The methods of sampling and experimental design were discussed. There was a description of the instruments, experimental treatment, testing procedures and data collection, and methods of data analysis.

CHAPTER IV

RESULTS OF THE STUDY

This chapter includes findings and statistical analysis for each respective hypothesis. The hypotheses are presented in the same order as in Chapter I and in null form. The statistical treatment of each hypothesis is reported and a brief written description of the results included. The statistical treatments related to each of the hypotheses are presented in tabular form.

A t test was used to calculate the significance of the differences between means for non-independent samples in Hypotheses 1.01, 1.02, 1.03, 2.01, 2.02, and 2.03. A t test to calculate the mean difference for independent samples was used to test Hypotheses 3.01, 3.02, 3.03, and 6.01. Although the assumptions listed by Hays (1963) for the justification of the use of a t test were considered, the following additional considerations were made. The samples were of equal size to insure homogeneity of variance, and the number of subjects was sufficiently large to insure the assumption of normality. An r test was used to test the significance of the Pearson Product-moment coefficient in Hypotheses 4.01 and 5.01.

Testing Hypothesis 1.01

The first hypothesis was "For the group that completed AA 100, experimental group one, there is no significant mean change in academic orientation as measured by the Strong-Campbell Interest Inventory as a result of completing the course."

Results of pre- and posttesting are presented in Table 1.

The null hypothesis was not rejected. A critical value of 2.052 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test. The difference between pretest and posttest mean scores on the variable academic orientation was not significant.

Students who completed the course AA 100 did not have significantly different academic orientation scores on the posttests than they had on the pretests. AA 100 did not have a significant impact on AOR test scores.

Testing Hypothesis 1.02

Hypothesis 1.02 states, "For the group that completed AA 100, experimental group one, there is no significant mean change in locus of control as measured by the Rotter Locus of Control scale as a result of completing the course."

The results of pre- and posttesting are presented in Table 2.

Table 1. Comparison of pretest and posttest means on AOR using a t test, following completion of AA 100.

Group	Measure	N	Mean	S_D^2	$S_{\bar{D}}$	t	Significance
One pre	AOR	28	34.46	38.432	1.172	1.432	*P < .05
One post	AOR	28	34.14				
Control pre	AOR	28	41.536	27.189	.985	.180	*P < .05
Control post	AOR	28	41.714				

*P = .05 (t = 2.052 two-tailed test; 27 df).

Table 2. Comparison of pretest and posttest means on I-E, using a t test,
          following completion of AA 100.

Group	Measure	N	Mean	S_D^2	$S_{\bar{D}}$	t	Significance
One pre	I-E	28	12.75	8.184	.541	2.91	*P > .05
One post	I-E	28	14.321				
Control pre	I-E	28	16.036	3.212	.338	.633	*P < .05
Control post	I-E	28	16.25				

*P = .05 (t = 2.052 two-tailed test; 27 df).

The null hypothesis was rejected. A critical value of 2.052 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test, and a critical value of 2.91 was reported.

The course, AA 100, did cause a change in locus of control scores from external control to internal control. There was a significant difference in pretest scores and posttest scores on the locus of control variable. As students complete AA 100, they gain a greater perception that they are in control of the variables that affect their academic destinies.

Testing Hypothesis 1.03

Hypothesis 1.03 states, "For the group that completed AA 100, experimental group one, there is no significant mean change in (a) Intrinsic Motivation, (b) Person Orientation, (c) Self-Enhancement, or (d) Goal-Deficiency as measured by the Merritt College Motivation Inventory as a result of completing the course."

The results of pre- and posttesting are presented in Table 3. A critical value of 2.052 was needed to reject each part of the null hypothesis at the .05 level of significance using a two-tailed test. Results of the t test indicate a significant change in (a) intrinsic motivation and (d) goal deficiency pre- and posttest scores as a result of completing AA 100. Portions (a) and (d) of the

Table 3. Comparison of pretest and posttest means on IM, PO, SE, and GD, using a t test, following completion of AA 100.

Group	Measure	N	Mean	S_D^2	$S_{\bar{D}}$	t	Significance
One pre	IM (a)	28	44.071	12.691	.673	5.25	*P > .05
One post	IM (a)	28	47.607				
Control pre	IM (a)	28	50.857	19.041	.824	.477	*P < .05
Control post	IM (a)	28	51.25				
One pre	PO (b)	28	49.893	44.767	1.264	1.299	*P < .05
One post	PO (b)	28	51.536				
Control pre	PO (b)	28	51.607	9.58	.585	0	*P < .05
Control post	PO (b)	28	51.607				
One pre	SE (c)	28	54.928	19.506	.835	.214	*P < .05
One post	SE (c)	28	55.017				
Control pre	SE (c)	28	52.25	23.189	.91	.275	*P < .05
Control post	SE (c)	28	52.5				
One pre	GD (d)	28	50.00	26.469	.972	2.393	*P > .05
One post	GD (d)	28	47.607				
Control pre	GD (d)	28	49.142	17.708	.795	.313	*P < .05
Control post	GD (d)	28	48.893				

*P = .05 (t = 2.052 two-tailed test; 27 df).

null hypothesis were therefore rejected. Assessment and Advisement for Student Development had a significant effect on students' sense of intrinsic motivation (IM) and caused them to have less anxiety (GD). The t test values for (b) person orientation and (c) self-enhancement differences were less than the critical values necessary to reject the null hypothesis at the .05 level of significance. AA 100 did not have a significant effect on person orientation or self-enhancement, i.e., the course did not have an effect on students' status seeking motivation nor on the way they relate interpersonally.

Testing Hypothesis 2.01

Hypothesis 2.01 states, "For the group that completed CO 102, experimental group two there is no significant mean change in academic orientation scores as a result of completing the course."

The results of pre- and posttesting are presented in Table 4.

The null hypothesis was rejected. A critical value of 2.052 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test and the test of significance yielded a critical value of 3.944. There was a significant increase in academic orientation scores between pre- and posttests. As a result of completing CO 102, students increase their desire to become

Table 4. Comparison of pretest and posttest means on AOR, using a t test, following completion of CO 102.

Group	Measure	N	Mean	S_D^2	$S_{\bar{D}}$	t	Significance
Two pre	AOR	28	38.464	25.828	.96	3.944	*P > .05
Two post	AOR	28	42.25				
Control pre	AOR	28	41.536	27.189	.985	.180	*P < .05
Control post	AOR	28	41.714				

*P = .05 (t = 2.052 two-tailed test; 27 df).

well educated and have a greater tendency to persist in that endeavor.

Testing Hypothesis 2.02

Hypothesis 2.02 states, "For the group that completed CO 102, experimental group two there is no significant mean change in locus of control measured by the Rotter Locus of Control Scale as a result of completing the course."

The results of pre- and posttesting are presented in Table 5.

The null hypothesis was rejected. A critical value of 2.052 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test and a critical value of 2.59 was reported. There was a significant change in locus of control scores as a result of completing CO 102. The course, CO 102, did cause a change in perceived locus of control from external to internal. Students feel more personal control over their academic and career futures after completing CO 102.

Testing Hypothesis 2.03

Hypothesis 2.03 states, "For the group that completed CO 102, experimental group two there is no significant mean change in (a) Intrinsic Motivation, (b) Person Orientation, (c) Self-Enhancement, or (d) Goal-Deficiency as measured by the Merritt College Motivation Inventory as a result of completing the course."

Table 5. Comparison of pretest and posttest means on I-E, using a t test, following completion of CO 102.

Group	Measure	N	Mean	S_D^2	$S_{\bar{D}}$	t	Significance
Two pre	I-E	28	14.143	4.148	.385	2.59	*P > .05
Two post	I-E	28	15.153				
Control pre	I-E	28	16.25	3.212	.338	.633	*P < .05
Control post	I-E	28	16.036				

*P = .05 (t = 2.052 two-tailed test; 27 df).

The results of pre- and posttesting are presented in Table 6.

A critical value of 2.052 was needed to reject each part of the null hypothesis at the .05 level of significance using a two-tailed test. Results of the t test indicate a significant change in (a) intrinsic motivation and (c) self-enhancement as a result of completing CO 102. Portions (a) and (c) of the null hypothesis were therefore rejected. The t test values for (b) person orientation and (d) goal deficiency were less than the critical values necessary to reject the null hypothesis at the .05 level of significance.

The course, Career Exploration, had a significant effect on students' sense of intrinsic motivation, i.e., they grew more intellectually predisposed, more independent, and more creative. Self-enhancement, need for prestige, suggess and self-esteem were also increased as a result of completing CO 102. Neither the way students relate interpersonally nor their anxiety level was significantly affected by CO 102.

Testing Hypothesis 3.01

Hypothesis 3.01 states, "There is no significant difference in academic orientation scores as measured by the Strong-Campbell Interest Inventory for those students

Table 6. Comparison of pretest and posttest means on IM, PO, SE, and GD, using a t test, following completion of CO 102.

Group	Measure	N	Mean	S_D^2	$S_{\bar{D}}$	t	Significance
Two pre	IM (a)	28	47.643	35.333	1.123	2.544	*P > .05
Two post	IM (a)	28	50.5				
Control pre	IM (a)	28	50.857	19.041	.824	.477	*P < .05
Control post	IM (a)	28	51.25				
Two pre	PO (b)	28	51.357	20.143	.848	1.262	*P < .05
Two post	PO (b)	28	52.428				
Control pre	PO (b)	28	51.607	9.58	.585	0	*P < .05
Control post	PO (b)	28	51.607				
Two pre	SE (c)	28	51.25	23.032	.907	3.70	*P > .05
Two post	SE (c)	28	54.607				
Control pre	SE (c)	28	52.5	23.189	.91	.275	*P < .05
Control post	SE (c)	28	52.25				
Two pre	GD (d)	28	50.107	26.9	.961	1.67	*P < .05
Two post	GD (d)	28	48.5				
Control pre	GD (d)	28	49.142	17.708	.795	.313	*P < .05
Control post	GD (d)	28	48.893				

*P = .05 (t = 2.052 two-tailed test; 27 df).

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who complete the course AA 100 and those students who complete the course CO 102."

The results of posttests are presented in Table 7.

The null hypothesis was accepted. A critical value of 2.052 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test and the t test yielded a critical value of 1.53. There was no significant difference in posttest means for the two groups on the variable Academic Orientation. Neither course had a significantly greater effect on Academic Orientation.

Testing Hypothesis 3.02

Hypothesis 3.02 states, "There is no significant difference in locus of control as measured by the Rotter Locus of Control Scale for those students who complete the course AA 100 and those who complete the course CO 102."

The results of posttests are presented in Table 8.

The null hypothesis was accepted. A critical value of 2.052 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test and the t test yielded a critical value of .836. There was no significant difference in posttest means on the locus of control variable. Neither course had a greater effect on the locus of control.

Table 7. Comparison of the posttest means on AOR, using a t test, following completion of AA 100 and CO 102.

Group	Measure	N	Mean	x^2	s^2	$s\bar{x}_1 - \bar{x}_2$	t	Significance
AA 100	AOR	28	36.178	7880.107				
					220.062	3.965	1.53	*P < .05
CO 102	AOR	28	42.25	4003.25				

*P = .05 (t = 2.052 two-tailed test; 27 df).

Table 8. Comparison of the posttest means on I-E, using a t test, following completion of AA 100 and CO 102.

Group	Measure	N	Mean	x^2	s^2	$s\bar{x}_1 - \bar{x}_2$	t	Significance
AA 100	I-E	28	14.312	514.107				
					20.028	1.196	.836	*P < .05
CO 102	I-E	28	15.143	567.428				

*P = .05 (t = 2.052 two-tailed test; 27 df).

Testing Hypothesis 3.03

Hypothesis 3.03 states, "There is no significant difference in (a) intrinsic motivation, (b) person orienta- tion, (c) self-enhancement, or (d) goal deficiency as measured by the Merritt College Motivation Inventory for those students who complete the course AA 100 and those students who complete the course CO 102."

The results of posttests are presented in Table 9.

The null hypothesis was accepted. A critical value of 2.052 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test. There were no significant differences in posttest means for the two groups on the variables (a) intrinsic motivation, (b) person orientation, (c) self-enhancement, or (d) goal deficiency. Neither course had a greater effect on the variables tested.

Testing Hypothesis 4.01

Hypothesis 4.01 states, "There is no correlation between academic orientation scores on the Strong-Campbell Interest Inventory and Intrinsic Motivation scores on the Merritt College Motivation Inventory."

Results based on pretests are reported in Table 10.

The null hypothesis was rejected. We can assume that the r of .575 is valid to a 99% degree of certainty. The probability of a Type I error is less than P = .01. There is a significant linear relationship between Academic

Table 9. Comparison of posttest means on IM, PO, SE, and GD, using a t test, following completion of AA 100 and CO 102.

Group	Measure	N	Mean	X^2	S^2	$S\bar{X}_1 - \bar{X}_2$	t	Significance
AA 100	IM (a)	28	47.607	4084.678	103.642	2.721	1.063	*P < .05
CO 102	IM (a)	28	50.5	1513.00				
AA 100	PO (b)	28	51.536	4044.964	122.034	2.952	.302	*P < .05
CO 102	PO (b)	28	52.428	2544.857				
AA 100	SE (c)	28	55.107	3084.687	97.618	2.64	.189	*P < .05
CO 102	SE (c)	28	54.607	2186.678				
AA 100	GD (d)	28	47.607	2152.678	116.641	2.886	.309	*P < .05
CO 102	GD (d)	28	48.55	4145.965				

*P = .05 (t = 2.052 two-tailed test; 27 df).

Table 10. Correlation of pretest scores of academic
           orientation and motivation using the Pearson
           Product-moment Correlation Coefficient and the
           r test of significance.

Measure	N	r	Critical ratio	Significance
AOR	84			
		.575	.217	P > .05
IM	84			

Orientation measured by the Strong-Campbell Interest
Inventory and the Intrinsic Motivation Scale of the Merritt
College Motivation Inventory.

The education level at which students set their
career goals is related to their intellectual pre-
disposition, degree of independence, and creativity.
Perhaps by increasing students' sense of intrinsic motiva-
tion, educators could increase career aspirations of
students or vice versa.

Testing Hypothesis 5.01

Hypothesis 5.01 states, "There is no significant
correlation between Intrinsic Motivation scores on the
Merritt College Motivational Inventory and Rotter Locus of
Control scores."

Results of testing Hypothesis 5.01 are reported in
Table 11.

Table 11.   Correlation of pretest scores of Intrinsic
            Motivation and Locus of Control using the
            Pearson Product-moment Correlation Coefficient
            and the r test of significance.

Measure	N	r	Critical Ratio	Significance
I-E	84			
		.25	.217	P > .05
IM	84			

The null hypothesis was rejected. The probability
of a Type I error is less than P = .05. It was of interest
to this researcher to determine if there is a significant
linear relationship between locus of control as measured by
the Rotter Locus of Control Scale and the Intrinsic Motiva-
tion Scale of the Merritt College Motivation Inventory.
The findings indicate that intrinsic motivation and internal
locus of control do indeed have a significant linear rela-
tionship and do indeed vary together. The findings were
not intended to determine whether or not I-E and IM are
similar constructs but rather to determine if they vary
together.

Testing Hypothesis 6.01

Hypothesis 6.01 states, "There are no significant
differences in academic orientation scores as measured by
the Strong-Campbell Interest Inventory for students who have

and have not selected a college major and have completed the course AA 100."

The results of posttests are presented in Table 12.

The null hypothesis was rejected. A critical value of 2.145 was needed to reject the null hypothesis at the .05 level of significance using a two-tailed test and the t test yielded a cricical value of 2.676. There was a significant difference in AOR scores for students who had selected a college major and those who had not when both groups had completed the course AA 100. Those students who had selected a college major before entering college made higher AOR scores than those who had not.

Summary

This chapter reported the statistical treatment, analysis, and findings of each research hypothesis.

It was found that the course AA 100 had a statistically significant effect on perceived locus of control, intrinsic motivation, and goal deficiency. The course CO 102 had a statistically significant effect on academic orientation, locus of control, intrinsic motivation, and self-enhancement. Results of the tests of significance revealed that there was a significant linear relationship between academic orientation and intrinsic motivation as well as internal locus of control and intrinsic motivation. It was found that students who had selected a college major

Table 12. Comparison of posttest means on AOR, using a t test, for those who had and had not selected a major and had completed AA 100.

Group	Measure	N	Mean	x^2	s^2	$s\bar{x}_1 - \bar{x}_2$	t	Significance
Major	AOR	14	41.85	3835.71	213.717	5.525	2.676	*P > .05
No Major	AOR	14	27.07	1720.93				

*P = .05 (t = 2.145 two-tailed test; 13 df).

and completed AA 100 scored higher on the AOR scale than those who had not selected a college major and had completed AA 100.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter will summarize the study, conclusions
will be drawn, and recommendations for further research
will be suggested.

Summary

A review of counseling literature indicates that
there have been marked changes in counseling and guidance
services offered to students in the last decade. There has
been a move away from viewing the counseling center as
primarily a mental health agency to a broader concept of a
student development center which includes psychological or
affective education in a group or classroom setting. The
two courses, AA 100 and CO 102, are such courses.

The course AA 100 was originally designed to provide
academic advisement and new student orientation for large
numbers of Mesa Community College students who were not
being reached by more traditional advisement methods. The
course CO 102 was developed to provide an alternative method
for large numbers of students to systematically explore
careers. Students who completed either course reported on
the course evaluation form that they felt a greater sense of
control over their educational futures and stated greater

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motivation to achieve their educational and career goals. In order to investigate the validity of the students' self-reports the researcher devised this study.

The purposes of this study were to measure the effects of two courses, Assessment and Advisement for Student Development and Career Exploration, on the academic orientation, academic motivation, and perceived locus of control in community college students. The study explored the correlation between Locus of Control and Intrinsic Motivation. Finally, the study tested the difference in academic orientation scores for students who had and had not selected a college major and had completed the course Assessment and Advisement for Student Development.

The population included eighty-four new students randomly selected from a pool of volunteers and randomly assigned to one of three groups.

Experimental treatment was presented in the form of two individualized, self-paced, human development courses. Group one was presented AA 100, group two was presented CO 102, and group three was a control group.

Instruments used to measure change were the following: (1) changes in academic orientation were measured by the Strong-Campbell Interest Inventory, (2) changes in perceived locus of control were measured by the Rotter Locus of Control Scale, and (3) changes in motivation were measured by the Intrinsic Motivation, Pearson Orientation,

Self-Enhancement, and Goal Deficiency scales of the Merritt College Motivation Inventory.

The experimental hypotheses were focused around the research problems. Research question number one was "Does completion of an individualized study guide in Assessment and Advisement for Student Development affect students' academic orientation, perceived locus of control, or their academic motivation?" The second research question asked, "Does completion of an individualized study guide in career exploration affect students' academic orientation, perceived locus of control, or their academic motivation?" The research design used to test hypotheses related to questions one and two was a pretest posttest control group design. A t test for non-independent means was used to determine the significance of those hypotheses.

It was found that AA 100 did not significantly affect AOR scores but completion of CO 102 did significantly increase the AOR scores and therefore increased the likelihood that students would persist in an academic setting in order to obtain a professional career.

AA 100 and CO 102 both had a significant effect on perceived locus of control. Students experienced a greater sense of internal control as measured by the Rotter Locus of Control Scale which suggests that they felt a greater sense of control over the variables that affect their educational destiny. They developed a greater belief that

achievements or goal attainments are contingent upon their own behavior or attributes rather than being the result of chance, luck, fate, teachers, etc.

Both AA 100 and CO 102 significantly increased intrinsic motivation scores on the Merritt College Motivation Inventory. Students became more intrinsically motivated, i.e., they became more motivated in the area of creativity and intellectuality. There was a shift toward abstract intellectual pursuits and creative activities like music and art.

Students who completed AA 100 had smaller goal deficiency scores. They reported feeling less inadequate, less depressed, and less anxious.

As a result of completing CO 102, students scored significantly higher on the Self-Enhancement scale of the Merritt College Motivation Inventory. Students who completed CO 102 increased their need for prestige, success, and self-esteem.

The third research question asked, "Does completion of the course AA 100 have more effect on Academic Orientation, perceived Locus of Control, or academic motivation than completion of the course CO 102?" The research design used to test hypotheses related to question three was a posttest only control group design, and a t test for independent means was used to determine significance of those hypotheses. It was found that there were no

significant differences in the pre- and posttest scores which could be attributed to AA 100 or CO 102. The differences in effect of the two courses on the variables studied were not significant.

Caughren (1975), author of the Merritt College Motivation Inventory, suggested that further research be done comparing the Intrinsic Motivation Scale of that instrument with AOR scores of the Strong-Campbell Interest Inventory. He suggested that many factors are involved in achieving success in college. Among those factors are intelligence, opportunity, motivation, persistence, locus of control, and academic orientation. Many of these characteristics overlap and probably vary together. Because the data were already gathered to answer other research questions, the fourth research question asked "What relationships exist between the Academic Orientation scale of the Strong-Campbell Interest Inventory and the Intrinsic Motivation scale of the Merritt College Motivation Inventory?" A Pearson Product-moment Correlation Coefficient was computed to determine the significance of the linear relationship of the two sets of scores. There was a significant correlation between Academic Orientation and Intrinsic Motivation.

"What relationships exist between the Intrinsic Motivation scale of the Merritt College Motivation Inventory and the Rotter Locus of Control Scale?" was research

question number five. A Pearson Product-moment Correlation
Coefficient was computed to determine the significance of
the linear relationships of the two sets of pretest scores.
It was determined that there was a significant linear
relationship between the two sets of scores. The research
findings indicate that Intrinsic Motivation and Internal
Locus of Control have a significant degree of correlation.
It seems reasonable to assume that they both emanate from
an internal phenomonological frame of reference. They both
seem to indicate that individuals assume responsibility for
their lives and behave as if they are in charge of achieving
goals which have meaning to them individually. Since
intrinsic motivation and internal control are reasonable
outcomes of higher education, it would seem that both the
Intrinsic Motivation scale of the Merritt College Motivation
Inventory and the Rotter Locus of Control Scale measure
prospectives necessary for successful scholarship.

Data generated from posttests served as a basis to
test research question number six, "Is there a difference in
academic orientation scores measured by the Strong-Campbell
Interest Inventory for students who have and have not
selected a college major and have completed the course
Assessment and Advisement for Student Development?" A
t test for mean differences in independent groups was used
to test the hypothesis. It was found that there was a
significant difference in the two groups and that those

students who had identified a major made significantly
higher scores on the Academic Orientation scale. Psycho-
logical literature indicates that persistence toward a
goal is increased as the goal becomes more clearly defined
and perceived by the individual as being attainable. High
AOR scores reflect a desire to or interest in persisting
toward professional career goals. The data from research
question number six seem to confirm that there is indeed
a relationship between selection of a college major and a
desire to persist in college.

Conclusions

Hypothesis 1.01

Academic orientation was defined as a measure of
probable persistence in academic setting (Stewart, 1958).
The AOR scale validity indicates that persons desiring
occupations that require a high level of academic training
like psychologists, chemists, psychiatrists, and mathemati-
cians score the highest on the scale. It is the researcher's
observation that while AA 100 might help community college
students define their educational objectives, those
objectives might be in occupational areas like welding,
fabrication techniques, business, etc. and would result in
low scores on the AOR scale. Completing AA 100 does not
result in higher AOR scores unless a Bachelors degree is
needed to achieve the career goal.

Hypothesis 1.02

College helps individuals develop personal resources which allows them to assume full responsibility for their lives as well as the ability to control important variables that affect their destiny. AA 100 provides a structure whereby students gain a greater sense of internal control over their lives.

Hypothesis 1.03 (a) (b)

An increase in intrinsic motivation means that students move toward internalizing their motives for acting the way they do. They act in ways that indicate a shift toward independence, creativity, and intellectuality. There is a shift toward abstract intellectual pursuits and musical, cultural, and artistic activities.

This shift seems to allow students to feel that they are more in control of the educational variables that control their lives and as a result feel less anxious about their educational future. Test scores indicate that completing AA 100, in which students specify goals and objectives, actually reduces problems in the areas of motivation and goal-setting. Subjects seem to have greater confidence in themselves and others and fewer feelings of inadequacy, depression, and anxiety.

Hypothesis 2.01

Academic orientation is increased by completing a course which requires an identification of personal values, interests, skills, work orientation, and job satisfiers, and then exploring careers which are consistent with those characteristics, and then making a tentative career choice. This AOR increase is supported by research demonstrating a positive relationship between knowledge of personal resources and appropriate vocational choices (Crites, 1969; Sheffre, 1965; Williamson, 1965).

It would seem to this writer that student responses on the Strong-Campbell Interest Inventory would be more consistent and decisive if they had previously selected a career. The fact that a career selection is made causes responses to be less random and creates more high and low scores in specific interest areas. This phenomenon could account for a significant change in AOR scores which reflect a probable persistence in school in order to attain career goals.

Hypothesis 2.02

The purpose of CO 102 is to have students select a career which reflects their personal needs and characteristics. This means taking control of the variables that affect career selection and assuming responsibility for making the choice and then actually making it. Data from

this research indicate that the shift in locus of control
from external to internal reflects the subjects' assumption
of responsibility for making a career decision, increased
understanding of how to make a career decision, exploring
accurate information regarding careers, and then being
forced to make a decision. In order to complete the CO 102
materials, the student must internalize a sense of control
over future possibilities. The results appear to validate
the relationship between an individual's self-knowledge
and his ability to choose between a diverse set of alterna-
tives (Peterson, 1971; Rokeach, 1968; Scheibe, 1970; Simon,
Howe, and Kirschenbaum, 1972).

Hypothesis 2.03

The shift toward intrinsic motivation would seem to
reflect many of the same dynamics discussed with Hypothesis
2.02. As the sense of internal control increases, greater
motivation to achieve educational goals occurs. Completion
of CO 102 requires that students specify a career goal. When
a goal is specified, the internal drive to achieve that goal
is increased.

The shift toward self-enhancement is consistent with
the findings in Hypothesis 2.01. High scorers on the Self-
Enhancement scale have a greater likelihood of persisting in
situations (except where independence or autonomy are
favored behavior) until they attain their goals. The scores

reflect a change toward hard work and appreciation of those things for which they have worked so hard with increased likelihood that they will finish whatever tasks they begin. There was a gain in need for prestige, success, and self-esteem. Korman (1967a, 1967b) found that individuals with high self-esteem were more likely to choose occupations which require high ability than individuals with low self-esteem. Resnick, Fauble, and Osipow (1970) found that subjects expressed greater certainty about their career choices than did subjects with low self-esteem. Walsh and Osipow (1973) demonstrated a significant relationship between self-esteem and appropriate vocational choice as well as between self-esteem and vocational certainty.

Hypotheses 3.01, 3.02, 3.03

There were significant mean gains on various scales, but when examined individually the results of the analysis of the data indicate that there were no statistically significant differences in the effects of the two courses, AA 100 and CO 102, on any of the variables examined in Hypotheses 3. While one course required curriculum selection and the other course a career choice, both courses had several factors in common which might account for the lack of significant differences. Both courses asked students to examine what is important to them in their lives by asking them to consider their values. Both courses asked students

to review how they act and to consider what they want from life and to question whether the two are consistent. The importance of these considerations has been reported by several researchers (Raths, Harmin, and Simon, 1966; Simon et al., 1972). In order to complete the course materials, students had to specify some future goals and develop a plan to achieve those goals. Curriculum and educational plans were part of the requirements for AA 100 and were implicit in CO 102. Both courses required students to do some reality testing. They were asked to record their beliefs about college majors and careers and then to compare their beliefs with the accurate information gathered. It was the writer's observation that many educational and career myths were dispelled and replaced with more realistic goals.

Hypothesis 4.01

It seemed reasonable to the researcher to expect the two variables, academic orientation and intrinsic motivation, to vary together. It seems that they reflect similar qualities in individuals. AOR scores reflect a desire to achieve a certain career level and intrinsic motivation reflects a personal achievement desire. Higher AOR scores reflect a desire to achieve careers that require college while high IM scores reflect people who are effective, intellectually predisposed, creative, and like to learn,

i.e., individuals capable of and motivated to complete college (Caughren, 1978).

Hypothesis 5.01

In order to have intrinsic motivation it would seem reasonable to expect that students would believe that they possess enough control over their life that they could achieve their goals (Balch and Ross, 1974; Segal and Mayfield, 1973; Warehine, 1972). Alschuler et al. (1970), Reimanin (1970a, 1970b), and Haines (1972) have reported the relationship between achievement motivation and locus of control. The findings of this study concur with those findings but more specifically indicate a direct linear relationship between the Rotter Locus of Control Scale and the Intrinsic Motivation Scale of the Merritt College Motivation Inventory.

Hypothesis 6.01

The results of testing Hypothesis 6.01 seem to be consistent with what one might reasonably expect. Students who have specified an educational goal have greater tendency to persist toward that goal.

Recommendations

The results of this study suggest a number of recommendations. First, further replication of this study on a larger and more diverse sample such as high school

students and adult learners would be desirable. Second, a follow-up study should be directed toward assessing the permanence of the changes observed. Third, the findings indicate that AA 100 and CO 102 do indeed affect certain variables important for career selection and educational planning and such courses might be instituted where internal motivation, persistence in college, a greater sense of personal control over one's academic future, and a career selection are desired outcomes. There is a need for further research to assess the differential contribution of each workbook unit and its effect on changes in educational and career decisions.

APPENDIX A

RAW DATA

Control Group

NO.	AOR		1-E		1-M		S-E		PO		GD	
1	55	56	21	21	61	62	63	63	67	64	37	38
2	38	32	19	19	53	55	49	60	41	46	49	45
3	46	43	16	16	61	55	47	41	60	59	45	41
4	31	36	21	20	56	57	57	57	61	62	34	32
5	43	43	18	17	46	47	47	47	62	60	48	48
6	34	34	17	16	44	40	60	58	49	50	58	54
7	31	29	12	16	59	61	50	58	60	56	31	32
8	70	70	20	20	68	68	60	60	56	55	49	45
9	34	33	14	16	33	40	38	45	43	59	46	50
10	38	37	17	15	46	45	45	38	42	47	46	51
11	52	52	17	16	68	62	65	58	62	55	47	57
12	30	18	12	12	41	41	46	46	61	52	51	43
13	54	58	18	21	56	59	60	63	64	65	49	51
14	42	41	14	15	50	51	47	46	52	50	49	48
15	38	37	12	10	38	31	55	60	54	55	64	73
16	37	40	10	11	54	54	51	50	36	36	57	58
17	37	42	16	16	46	57	66	55	60	64	49	42
18	43	40	16	15	56	58	58	56	66	66	50	51
19	55	70	20	22	56	61	58	65	46	47	47	47

NO.	AOR		I-E		I-M		S-E		PO		GD	
20	39	37	18	19	61	60	57	54	45	47	41	40
21	13	20	10	5	41	33	50	49	35	35	61	68
22	67	63	17	19	59	56	55	52	45	44	50	47
23	33	35	16	17	43	44	31	30	39	38	50	52
24	54	58	14	16	50	59	55	63	36	40	42	43
25	37	35	17	17	34	34	41	42	38	37	68	68
26	26	31	18	16	49	50	46	47	55	53	52	51
27	33	26	14	15	49	50	57	58	59	60	52	53
28	53	52	15	15	55	54	49	49	51	53	47	48

CO 102

NO.	AOR		I-E		I-M		S-E		PO		GD	
29	36	42	18	20	40	44	33	36	35	45	50	45
30	53	59	13	17	38	43	68	72	54	58	50	46
31	43	39	17	18	40	52	49	47	56	62	32	29
32	28	26	6	6	44	58	66	60	57	51	44	43
33	41	49	14	16	43	55	47	50	60	60	51	42
34	30	33	14	16	53	58	55	58	59	62	53	45
35	30	39	14	11	43	52	52	62	42	47	46	44
36	38	28	18	18	38	36	68	68	60	59	53	52
37	25	39	9	13	47	52	54	62	57	55	45	37
38	21	34	21	18	52	49	45	44	38	42	46	53
39	23	25	10	11	40	55	54	63	47	49	51	62
40	31	36	15	17	53	58	58	61	60	60	54	48
41	62	59	9	7	59	56	55	54	26	35	62	67

CO 102

NO.	AOR		I-E		I-M		S-E		PO		GD	
42	37	39	12	16	48	55	42	46	50	51	58	55
43	33	34	15	15	43	31	43	43	55	51	60	59
44	49	52	17	19	49	52	51	55	46	59	45	45
45	39	47	8	6	49	46	39	49	24	25	61	70
46	21	22	21	23	43	46	49	54	54	49	67	60
47	33	42	15	17	52	53	46	55	60	59	44	38
48	38	57	20	23	52	55	50	63	42	46	26	28
49	63	67	14	16	55	55	50	49	55	55	31	31
50	57	57	15	19	54	50	48	54	51	56	38	30
51	44	50	14	13	44	46	43	57	52	55	75	73
52	56	58	8	10	58	60	36	39	34	34	62	58
53	9	20	10	10	33	37	65	65	54	42	58	55
54	53	48	20	19	58	55	65	58	65	65	50	49
55	44	42	17	17	46	44	52	50	46	47	56	62
56	38	39	12	13	61	61	58	59	69	69	35	35

AA 100

NO.	AOR		I-E		IM		S-E		PO		GD		MAJOR
57	27	28	4	6	37	30	49	47	39	37	66	69	Yes
58	16	21	8	9	36	40	49	51	48	44	55	50	No
59	22	36	19	22	46	53	49	57	59	57	44	45	Yes
60	26	27	7	11	34	39	47	52	39	67	46	40	No
61	73	75	19	17	65	71	52	46	49	49	32	31	Yes

AA 100

NO.	AOR		I-E		IM		S-E		PO		GD		MAJOR
62	63	44	19	20	46	52	58	60	52	54	50	47	No
63	47	58	12	15	45	54	56	55	51	56	51	46	Yes
64	23	25	10	15	37	42	57	58	61	65	39	36	No
65	57	60	8	13	61	59	65	66	67	62	52	57	Yes
66	39	39	12	12	58	61	65	62	42	47	41	44	Yes
67	15	23	19	24	28	35	65	64	41	47	47	44	Yes
68	68	71	15	18	33	36	57	50	42	50	61	57	Yes
69	39	34	11	13	38	41	44	39	65	66	46	42	Yes
70	47	46	17	19	52	58	66	68	64	66	52	47	Yes
71	28	32	17	14	59	52	66	65	62	61	38	51	No
72	46	34	11	11	56	65	49	55	50	54	57	51	No
73	32	34	7	12	40	44	41	43	40	43	60	58	No
74	21	18	9	16	16	18	23	16	26	17	60	64	No
75	46	54	15	13	56	61	51	55	61	62	48	41	Yes
76	48	51	8	12	47	52	58	60	39	40	38	38	Yes
77	20	21	16	16	41	40	62	66	47	35	49	46	Yes
78	38	44	13	15	53	50	68	65	60	60	53	52	Yes
79	17	18	10	8	50	55	55	50	36	37	35	37	No
80	5	6	16	17	38	41	60	57	51	60	40	34	No
81	17	16	14	8	24	33	57	60	59	64	51	51	No
82	32	34	16	20	30	34	49	60	35	35	66	52	No
83	36	18	15	15	53	61	60	62	52	49	66	56	No
84	44	46	10	10	55	56	60	60	60	59	51	49	No

APPENDIX B

AA 100 ASSESSMENT AND ADVISEMENT FOR STUDENT DEVELOPMENT

AA 100 ASSESSMENT AND ADVISEMENT

INDIVIDUALIZED INSTRUCTION

Developed by Charlie Mitchell

Mesa Community College

Cover By Carole Bigelow
Unit 5 by Dr. William Young and Charlie Mitchell, 1978

AA 100   ASSESSMENT AND ADVISEMENT   1 Credit

CATALOG DESCRIPTION:

Self-instructional programmed course providing an assessment of academic and educational goals. Curriculum advisors in each subject area will assist in designing an educational program and selecting a semester schedule compatible with the goals of each student.

COURSE GOALS:

1. To give the student a general campus orientation.

2. To help the student assess personal and academic skills.

3. To assist the student in understanding the relationship between career choice and college coursework.

4. To help student understand why he/she is in college and the values out of which that need arose.

5. To help students identify and specify their educational goals and objectives.

6. To promote with the student the feeling that there is direct access to faculty.

7. To clarify for students the expedient means for obtaining assistance from faculty with expertise in designated curriculum areas.

8. To design a plan of action for subsequent course work.

9. To improve the student's chances for academic success.

COURSE OBJECTIVES:

1. The student will complete all activities in the instructional packet.

2. The student will produce the following:
   a)   Identified expectations
   b)   A personal needs assessment
   c)   A stated goal(s)
   d)   A list of campus and community services available to provide methods/means in reaching goal(s)
   e)   A sequentialized order of events in a plan of action to reach the designated goal(s).

SEMINAR SCHEDULE

The seminars are designed to answer questions about any of the units and to discuss issues relevant to the course. You will find the seminars very helpful, however they are not required.

Following is a schedule of seminar times related to specific units.

Topic - Orientation to the Course.

Monday, February 26,	1:30 to 2:30	LA3S
Tuesday, February 27,	2:30 to 3:30	NU 101
Wednesday, February 28,	10:30 to 11:20	NU 101
Wednesday, February 28,	11:30 to 12:20	NU 101
Thursday, March 1,	10:30 to 11:20	LA3S
Thursday, March 1,	8:30 to 9:20	LA3S

Topic - Units 1, 2, 3, 4

Monday, March 5,	1:30 to 2:30	LA3S
Tuesday, March 6,	2:30 to 3:20	NU 101
Wednesday, March 7	10:30 to 11:20	NU 101
Wednesday, March 7	11:30 to 12:20	NU 101
Thursday, March 8	10:30 to 11:20	LA3S
Thursday, March 8,	8:30 to 9:20	LA3S

Topic - Units 4, 5, 6

Monday, March 26,	1:30 to 2:30	LA3S
Tuesday, March 27,	2:30 to 3:30	NU 101
Wednesday, March 28,	10:30 to 11:20	NU 101
Wednesday, March 28,	11:30 to 12:20	NU 101
Thursday, March 29,	8:30 to 9:20	LA3S
Thursday, March 29,	10:30 to 11:20	LA3S

ADVISOR CHECK LIST

Have your Faculty Cordinator check and intitial each completed unit.

_____Orientation   -   Unit 1

_____Self-Assessment -   Unit 2

_____Why MCC   -   Unit 3

_____Educational   -   Unit 4
                               Objectives

_____Educational Plan -   Unit 5

_____Trial Schedule   -   Unit 6
                               Grade P - Z

When all units have been initialed by your Faculty Coordinator, take
this sheet to the Advisement Center to have your grade recorded.

DIRECTIONS

Welcome to AA 100 Assessment and Advisement. This course is an individualized, programmed course designed to orient you to college life. Empahsis is given to self-assessment in order to design a sequential series of events which are relevant to your perceived needs and goals.

There are seven units for you to complete. You are to complete the units at your own pace. If you run into difficulty, you may ask your faculty coordinator for help. Seminars are provided weekly to answer your questions regarding the units and to discuss issues related to the course. The seminars are optional but you will find them most helpful. In order for you to receive credit each unit must be checked by your faculty coordinator. When you have completed the course, your faculty coordinator will report your grade to be officially recorded on your transcript.

You are now ready to begin the first unit.

CAMPUS ORIENTATION

Before your self-assessment begins, it is helpful for you to know what Campus resources are available to you. You will quite likely find some of the resources valuable as you work through these six units.

Visit each of the campus resources listed. In the space provided write a paragraph about each of the services. Obtain a validation stamp from the service area in the space provided. Ask your faculty coordinator to initial the Advisor Checklist for Unit 1.

At the end of Unit 1, you should have knowledge of the services provided for students on this campus and where to go for assistance when you need help.

VALIDATION
STAMP

_____Counseling Center

_____Special Student Services

_____Financial Aid Center

_____Career Center

_____Advisement Center

_____Library - Participate in
CO 100 Library Media
Walking Tour. Pick up
instructions at refer-
ence desk. After
completing tour, get
your sheet stamped at
circulation desk.

_____Job Placement Office

UNIT 2

SELF ASSESSMENT

This unit will help you raise to a conscious level your present educational abilities. You will be asked to name some of your non-school experiences which you believe will effect your school performance.

Identifying your interests, skills, strengths, and the areas of past successes as well as weaknesses will help you gain a clearer self assessment and a better understanding of the educational tasks lying ahead of you. The better you understand your skills and your needs the better you will be able to state your educational objectives in Unit 5.

Refelect on your previous coursework and identify the courses in which you did well and list them in the left column. In the right column list the skills you used that allowed you to be successful. In each course examples of skills are reading, writing, creativity, speaking, persistence, remembering, etc.

COURSE   SKILLS I USED TO BE SUCCESSFUL

1. _____   1. _____

2. _____   2. _____

3. _____   3. _____

4. _____   4. _____

5. _____   5. _____

In which courses did you make your best and poorest grades?

           BEST   POOREST

1.   1.

2.   2.

3.   3.

4.   4.

5.   5.

What was your high school grade average? Circle one.
A A- B+ B B- C C-

What are some non-school experiences, both good and bad, have you had which will effect your educational goals and plans?

In your previous school work which courses were of most interest to you?

You will be able to complete this unit by completing the Math Placement Test, English Placement Test, and the Reading Placement Test in the Testing Center, Room 404, 1:00 p. m. to 7:00 p. m., Monday through Thursday.

If you have already taken the tests, record your scores in the indicated space.

TEST RESULTS

Math Placement Test _____   Course Indicated_____

English Placement Test_____   Course Indicated_____

Reading Placement Test_____   Course Indicated_____

PLANNING YOUR WORK WEEK

It is important to remember occasionally that there are only 24 hours in each day and 168 hours in each week. It is common for college students to want to participate in more activities than their time allows, and as a result perform poorly in many of the activities. ·Unfortunately this poor performance often includes school work. The following exercise is designed to help you assess the approximate allocations of your time.

Fill in Blanks:

1. Number of hours in a week.   168

2. Average number of hours of sleep per week   _____

3. Number of hours per week you will work and/or
   manage a household.   _____

4. Number of hours for hobbies, recreation, church, or
   other scheduled activities.   _____

5. Number of hours needed for eating, shopping, watching
   TV, or traveling to or from work or school   _____

6. How many courses will you take? _____
   (Multiply the number of courses times 3 hours per week) _____

7. To compute the number of hours for study, multiply
   number of hours (in number 6) by 2.   _____

8. Total hours of items 2 through 7   _____

9. If your answer to number 8 is less than 168, subtract
   from 168 =   _____

   THIS IS THE NUMBER OF HOURS YOU HAVE LEFT
   OVER TO USE EACH WEEK   _____

10. If your answer to number 8 is more than 168, you must
    adjust part of your plan. Perhaps you are working too
    many hours or planning to take too many classes.

UNIT 3

WHY MCC

Students attend college for many reasons and your reason is probably different from your neighbor's. Some of the reasons for attending Mesa Community College often reported include to learn and grow from exposure to intelligent people, because Mom and Dad want me to, to avoid making career decisions, to party, to find a husband/wife, to develop job credentials, etc. Unit 3 helps you identify your motives for choosing Mesa Community College and the values from which these motives arose. At the conclusion of this unit you will have your motives and alternatives in writing.

Below is a list of values which often motivate people to attend college. Check those values which you feel are important to you and then arrange those values you checked in order of their importance to you. Place 1 next to the value most important to you; place 2 next to the value which is second most important, etc.

_____	An economically prosperous life
_____	Family secuirty
_____	A sense of personal competency
_____	Enjoyment derived from knowledge
_____	Self respect
_____	A sense of accomplishment
_____	Social recognition
_____	Wisdom
_____	A sense of beauty and the arts
_____	Prestige of having a degree
_____	To be able to help others
_____	Power and influence
_____	Security
_____	Help society
_____	Have more leisure time
_____	Independence
_____	Factual knowledge

99

Answer in complete sentences. and paragarph form the following
questions:

Why am I attending College?

Why did I choose Mesa Community College?

What are your other alternatives?
(Examples - Get a job training horses, join the service, etc.)

I expected Mesa Community College to be

I have found Mesa Community College to be

     A person's reason for attending college is more often than not associated with a Career Choice. While Career Exploration is not within the scope of this Course it is important to identify careers or jobs which you have been considering. It is important to consider your Career Choice before specifying your educational goals and plans (Units 4 and 5) because they will most likely reflect your career selection.

     If you are unsure of your Career Choice or if you are having difficulty selecting a career you will find CO 102, Career Exploration, a most beneficial course. You may register for the 2 credit, individual-ized instruction version of Career Exploration now and take it simultan-eously with this Course. CO 102, Career Exploration, will help you evaluate your interests, skills, and work related values to determine what you want from a job in return for your time and energy, and then assist you in identifying jobs/careers which possess those qualities.

What careers are you presently considering?

What careers have been suggested to you by your family and friends?

Describe the kind of life you want to be living ten years from now.

UNITS 1, 2, 3

Summary

The first three units helped you understand your personal chara-
cteristics and how they are important in helping you determine your
educational goals. You also identified personal and college resources
available to you to achieve your gaols.

Look back to the previous units and provide the following
summary data.

Important Personal Values   Why Am I At MCC

1. _____   1. _____

2. _____   2. _____

3. _____   3. _____

4. _____   4. _____

5. _____   5. _____

Academic Skills   Tentative Career Choices

1. _____   1. _____

2. _____   2. _____

3. _____   3. _____

4. _____   4. _____

5. _____   5. _____

Most Important Campus Resources   Most Interesting Courses
For You

1. _____   1. _____

2. _____   2. _____

3. _____   3. _____

4. _____   4. _____

5. _____   5. _____

UNIT 4

WHAT DO I WANT FROM MCC

At the end of this unit, you will be able to write clear personal objectives in behavioral form, you will have written clear personal objectives pertaining to what you want from your college experiences.

Changing values into clearly stated pesonal objectives is an essential skill in effective decision making. It is easier to decide how to accomplish your objective if you can say clearly what your objective is.

Your objective is clear if you can answer these questions:

1. Does it make clear exactly what is to be accomplished described in terms of observable outcomes which can be measured?

2. Is there a way you can without question judge whether you have reached your objective?

3. Does your statement communicate competence level; i. e., does it make clear what you can do (observable behavior) when you reach your goal?

4. Does your statement of objectives indicate a time by which you should reach it?

EXAMPLES

A. I want an Associate in Arts degree in Electronics in the spring of 1979 so that I can be employed by Motorola as an electronics technician.

AA in Electronic Technology

1. clear in terms of outcomes which can be measured.

2. it is clear when this objective has been reached.

3. employed as an electronics technician – communicates competency level by saying what can be done when the goal is reached

4. in the spring of 1979 – indicates a time by which the goal is to be reached.

B. By the end of the first semester of my freshman year,
    I plan to be planing first chair saxaphone in the MCC
    Marching Band.

    1. By the end of the first semester of my freshman
        year - specifies when the objective is to be
        accomplished.

    2. Playing first chair saxophone in the MCC
        Marching Band - specifies what is to be accomplished
        in such a way that it is clear when the goal has been
        reached and competence level is implicit in the
        statement.

DIRECTIONS:

    Write the five most important educational objectives you wish to
achieve by attending Mesa Community College and identify the values
from which they arrive.

    Example: I want an A. A. degree in Electronics in the
             spring of 1979 so that I can be employed by
             Motorola as an electronics technician. This
             goal arises out of my need for an economically
             propsperous life, a sense of personal competency,
             and security.

    1. OBJECTIVE

    2. OBJECTIVE

    3. OBJECTIVE

    4. OBJECTIVE

    5. OBJECTIVE

EXAMPLES

WHY		WHAT - OBJECTIVES
1. To learn a technical skill.	1.	I want to complete a course in the 2nd semester so that I can change the ignition points and plugs in my car.
2. To study Engineering.	2.	I plan to complete the Pre-Engineering requirements in two years so that I can transfer to ASU and begin the Engineering Core Curriculum.
3. To play football.	3.	I plan to be a member of the MCC footbal traveling squad the 1st semester of '79 & '80.
4. To study music.	4.	In two years I want to learn to play the piano at _____ proficiency so that I can accompany an elementary school choir.
5. To decide on a career.	5.	At the end of my sophomore year I will have my general studies program completed and will have sampled courses from enough departments so that I can make a choice about an academic major which will lead to a Career Choice.
6. To prepare for a job.	6.	My objective is to learn enough accounting that I can be self-employed as a bookkeeper and do income tax work. I plan to accomplish this in 3 semesters.
7. To gain factual information knowledge.	7.	My objective is to complete 64 hours of college credit in three years, which will teach me to use the library, write clearly, and speak intelligently and fluently to groups.

UNIT 5

HOW TO REACH SPECIFIED GOALS
THROUGH SYSTEMATIC PLANNING

Being able to specify objective Educational goals is only the first step in achieving these goals. The second step is to understand and specify the process necessary to get you from where you now are to your specified goal. That means developing a plan based on your needs.

Your advisor may assist you in developing both a plan to achieve your educational objectives and your overall educational goals. Your plan should reflect the following consideration: your objectives, and the resources available to you to achieve the goals.

For each of your stated objectives in Unit 4 write what you must do in order to achieve your goal.

1. OBJECTIVE

    PLAN

2. OBJECTIVE

    PLAN

3. OBJECTIVE

    PLAN

4. OBJECTIVE

    PLAN

5. OBJECTIVE

    PLAN

HOW TO SELECT COURSES

I. What is a COURSE?

Credit Hours

Each course represents a set number of credits called "hours" based on the content of the course and the amount of time spent in class. For example:

        ENGLISH 101 . . . . . . 3 hours credit

Most courses are worth 3 hours credit. A lab with a course usually adds 1 hour or more.

        BIOLGOY 110 + lab . . . 4 hours credit

To determine the number of credit hours you will be carrying per semester, check the hours credit by each course and add these. Example:

        Biology 110 . . . . .4 hours credit

        English 101 . . . . .3 hours credit

        Political Science 100 . . . . .3 hours credit

        P. E. 101 . . . . .1 hour credit

        General Business . . . . . . 3 hours credit

        Counseling 102 . . . . 2 hours credit

                           16 hours credit

11. How do I <u>know</u> a COURSE if I see one?

It looks like this in the Schedule Book:

Subject Code	Section No.	Course Title	Room Bldg.	Days	Time	Instructor	Credit
EN 101	2011	Freshman English	LA4S	MWF	8:30-9:20	A.Walt	3

This means that English 101, Section 2011, Freshman English, will meet in the Liberal Arts Building Room 4, on the South side, on Monday, Wednesday and Friday from 8:30 to 9:20 a. m. with Mr. Walt as the teacher and is worth three semester hours of credit.

EN	-	Department Prefix = English
101	-	Course Number
2011	-	Section Number
Title	-	Freshman English
LA4S	-	Liberal Arts, Room #4 South Side
MWF	-	Monday, Wednesday, Friday
8:30-9:20	-	Time of Class
Walt	-	Instructor
3	-	Number of Credits

WHAT COURSES MUST I TAKE?

The answer to this question depends on why you are planning to attend Mesa Community College, i. e., your education goal.

If you have NO DEGREE GOAL, proceed to paragraph one (1). You do not have to read paragraph two or three.

If you goal is to earn a TWO-YEAR GENERAL or OCCUPATIONAL DEGREE, you should read paragraph two (2).

If your goal is a FOUR-YEAR TRANSFER DEGREE, go directly to paragraph three (3) without reading one and two.

Paragraph 1

If you have no degree goal and wish to take classes for personal benefit or to develop a specific skill, THEN you may enroll in any course for which you have the pre-requisite (DEFINITION: a pre-requisite is a course or skill which is required before a second course can be taken). Courses requiring a pre-requisite are marked with an asterik (*) in the schedule book.

Paragraph 2

If you are seeking a two-year occupational or general degree, you need at least 64 hours credits to graduate. Twenty-two (22) of the credits must be taken in a specific General Education Pattern. (See page 28). The five areas and credits required are:

English 101-102	- 6 credits required
Humanities	- 2 credits required
Health, or P. E., or Recreation	- 2 credits required
Social, Behavioral, or Cultural Sciences	- 6 credits required
Quantitative-Technical Science	- 6 credits required
TOTAL	22

The rest of the 42 credits to reach 64 for graduation may be specified
by your Department as major courses or by you as elective courses.
The MCC catalog, center portion, presents curriculum guides to assist
you with your choices.

My major curriculum guide is _____
and is found on page _____of the catalog. If undecided, use the
General Curriculum Guide on page 63.

As you explore the first semester or year, you may wish to pay atten-
tion to courses which have the words "Survey of", "General", or "Intro-
duction to", in their titles.

If you are undecided about your major curriculum, the Counseling
Classes CO 101, Personal and Career Development, and CO 102, Career
Exploration, should be considered as a means of giving some direction
to your college career.

Paragraph 3

If a four-year or Bachelor's Degree is your goal, and you plan to take some lower division credist prior to transfer, the following pattern is recommended:

English	6 credits
Humanities	8-12 credits
Social Cultural or Behavioral Sciences	8-12 credits
Science-Math	8-12 credits
P. E.	0-2 credits
TOTAL	30-44 credits

Remember, you may transfer before earning 64 credits. A two-year degree is recommended but not required. Refer to page 29, University Transfer Guide for specific courses which fall into each of the areas listed above. Other courses may be selected depending upon your major curriculum guides for certain majors to assist you with your choices.

My major curriculum guide is_____

and is found on page_____of the catalog. If undecided,

use the General Curriculum Guide on page 63.

It is a good idea for you to get a catalog from the four-year college to which you plan to transfer. Our advisors will be able to give you more and better assistance during your first semester.

COURSES LISTED BY NUMBER ONLY ON PAGE_____

ARE DESCRIBED BRIEFLY IN THE BACK PART OF

THE MESA COMMUNITY COLLEGE CATALOG

MESA COMMUNITY COLLEGE

General Studies Requirements for Graduation

I. ENGLISH - 6 credits required
        EN 101-102 (EN 104 may be substituted for EN 101 and
        102)

II. HEALTH or P. E. or RECREATION - 2 credits required

III. ·HUMANITIES - 2 credits required
        Art History - AH 105-106-107 English Humanities - All EH
        courses Foreign Language - All courses Humanities - All
        HU courses Music MU 100-125-126-141-142-225-226-240-
        242-120 Philosophy - All PI courses Speech - 100-241
        Theater Arts - TH 111-122-205 American Studies - AM
        155-156 (literature portion only
        EH 141-142)

IV. SOCIAL BEHAVIORAL OR CULTURAL SCIENCE. - 6 credits
     required.
        American Studies - AM 155-156 (History portion only - HI
        103-104)
        Anthropology - AN 100-102-245
        Economics - EC 152-201-202-260-203
        Education - ED 221-230 Future Studies - FT 101
        Geography - GE 112-152-221-253
        History - All HI courses
        Adm. of Justice - AJ 101
        Political Science - All Pol. Sci. courses
        Home Economics - HE 157-176
        Public Administration - PA 103
        Psychology - PY 101-102-122-125-180-205-215-240-260-280-250
        Social Science - 101-102
        Sociology - All SO courses

V. QUANTITATIVE SCIENCE - Technical - 6 credits required
        Accounting - AC 117-119-120-219-220
        Administration of Justice - AJ 215-216
        Agriculture - AG 143-154-161-165-180-184-185
        Anthropology - AN 101
        Fire Science - FS 107-109-110
        General Business - GB 131-221-222
        Geography - GE 105-211-271-281
        Political Science - PS 201
        Psychology - PY 112-230-290-295

                           OR

        Any course in Biolgy, Chemistry, Drafting, Electronics,
        General Technology, Engineering, Geology, Math, Nursing,
        Physical Science or Physics.

UNIVERSITY TRANSFER

General Studies Requirements

I. English - 6 credits required
EN 101 and 102
(EN 104 may be substituted for 101 and 102)

II. Humanitites - 8-12 credits required
Art History - AH 105-106-107
English Humanities - EH - All Courses
Foreign Langugage - check with specific department at ASU.
Humanities - HU 100-101-201-202-205-206-210
Music - MU 100-125-126-141-142-225-226-241-242-120
Philosophy - PI - ALL courses
Speech - 100-241 - check with specific department at ASU
Theater Arts - TH 111-122-205
American Studies - AM 155-56 (Literature portion only -
    EH141-142)

III. Social, Behaviorial or Cultural Sciences - 8-12 credits
Administration of Justice - AJ 101
American Studies - AM 155-156 (History portion only - 103-104)
Anthropology - AN 100-102-245
Economics - EC 152-201-202-203-260
Education - ED 221-230
Future Studies - FT 101
Geography - GE 112-152-221-253
History - HI - ALL courses
Home Economics - HE 157-176
Political Science - ALL courses
Public Administration - PA 103
Psychology - ALL except 112-230-290-275
Social Science - SS 101-102
Sociology - ALL courses

IV. Science-Math - 8-12 credits required
Anthropology - AN 101
Biology - ALL courses
Chemistry - ALL courses
Engineering - ES 102-104
Geography - GE 105-211-271-281
Geology - GL 101-102-111-113-280
Mathematics - MA-ALL courses except 5-7 (only 3 credits of
    Math 108 transfer)
Physical Science -PL-ALL courses
Physics - PH - ALL courses
Psychology - PY 112-230-290-295

EDUCATIONAL PLAN

List the courses which will allow you to achieve your educational goals or the courses necessary for you to graduate from MCC.

COURSE NUMBER & TITLE   SEMESTER HOURS OF CREDIT

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

TOTAL HOURS_____

U N I T   6

T R I A L   S C H E D U L E

DATE _____ NAME _____ CURRICULUM _____

Make sure that you have satisfied all prerequisites for courses in which you plan to enroll.

DEPARTMENT	COURSE NUMBER	SECTION NUMBER	COURSE TITLE	INSTRUCTOR	TIME OF DAY MON TUE WED THU FRI SAT	ROOM NO.	SEMESTER HOURS

THIS BECOMES YOUR PERMIT TO REGISTER

_____
Advisor's Signature

DIRECTIONS:
  Project yourself into the future and visualize how you would like to be when your immediate goal objectives have been completed. Now, answer these questions:

    How will you be different when you have accomplished your objectives?

    How will your general outlook on life be changed?

    How will the way you relate to people be changed?

    How will you be more satisfied with life?

    How will your attitude toward yourself change?

REGISTRATION - THE FIRST HURDLE

To register you will need the following materials which are available in the Advising Center:

      1.   Schedule Booklet
      2.   College Catalog

Schedule Book - KEY PAGES - Fill in the blanks

page _____   tells when and where to start and the steps to follow
page _____   Class card location
page _____   Map of Registration Area

Registration will be easier if you read the Schedule Booklet carefully and Avoid Late Registration.

Insert the correction information in the blanks that follow:

1.   I begin to register on _____(day),

     _____(date), at _____(time).

2.   I get my packet in the _____Room.

3.   I get class cards in these rooms:

     a.____,   b._____, c._____, d._____
     e.____,   f._____, g._____, h._____

4.   I pay my fees in the _____Room.

After paying fees, you will be a Mesa Community College Student.

Good luck in the weeks ahead!

Remeber, we in the Advising Center are happy to help you

refer you to the proper person on campus who can help you.

EVALUATION

What did you find most beneficial about the course?

_____

_____

_____

_____

_____

What did you find least beneficial about the course?

_____

_____

_____

_____

How would you change the course to make it more beneficial?

_____

_____

_____

_____

How would you change the course to make it more interesting?

_____

_____

_____

_____

_____

APPENDIX C

CAREER EXPLORATION: AN INDIVIDUALIZED PLANNING GUIDE

CAREER EXPLORATION: An Individualized Planning Guide

Competency Based Instruction

Developed by: Jane Welsh, Ph.D.
                          and
                 Charlie Mitchell

MESA COMMUNITY COLLEGE
Mesa, Arizona

Cover design by - Carole Bigelow

COURSE DESCRIPTION

CO 102 CAREER EXPLORATION
      This course is individualized, self-paced instruction designed
to assist the student in making a career choice. Topics include
values, clarification of interests, skills assessment, job satisfiers,
exploration of career information and understanding the data, people,
or things orientation of work.

COURSE GOALS:

1) To provide the student with a programmed instruct-
   ional packet which allows individual rate of progress
   and completion.

2) To familiarize students with the process of career
   exploration.

3) To assist the student in making a reasonable career
   choice, based on self-knowledge, accurate informa-
   tion about the world of work, and an understanding
   of the career search process.

COURSE OBJECTIVES:

1) The student will complete all activities in the instruct-
   ional packet.

2) The student will produce the following:

   a) A statement of personal values and how they are
      reflected in a career choice.

   b) A list of personal interests and how they are man-
      ifest in a career selection.

   c) A statement of the relative importance to the student
      of a data, people, or thing orientation.

   d) A list of skills that the student would like to market.

   e) A list of job satisfiers that the student wants from
      his/ her career in exchange for his/her time,
      energy, and skills.

   f) Accurate information about the career(s) selected
      from structured career research.

   g) A career decision identifying three top career
   choices.

EXPECTATIONS

I. You will be expected to:

1. Complete all modules by the end of the semester.

2. Attend two seminars
    a)   Interest and skills
    b)   Career Exploration

3. Complete one of the following career exploration surveys which are located in the Testing Center, Room 404:

    Major   - Minor Finder
    Job-0

4. Use the resources available in the Career Center

5. Get your instructor's signature for each completed unit.

6. Complete a course evaluation form and leave it in the Career Center.

II. You can expect to gain:

1.   Greater self awareness

2.   Greater awareness of your individual strengths and skills

3.   Greater knowledge of where to obtain occupational and career information

4.   Greater understanding of the career search process

5.   A career choice.

SEMINAR SCHEDULE

REQUIRED

UNIT	DATE	INSTRUCTOR
II and III		
VII and VIII		

Suggested:

CHECK LIST

Have your instructor check and initial each completed unit. It is not
necessary to initial each unit before you go on to the next unit.

_____	Values	Unit 1
_____	Interests	Unit 2
_____	Skills	Unit 3
_____	Data, people, things	Unit 4
_____	Job Satisfiers	Unit 5
_____	Summary of Values - Interests, Skills & Job Satisfiers	Unit 6
_____	Expanding Career Awareness	Unit 7
_____	Occupational Information	Unit 8
_____	Summary Chart and Evaluation	Unit 9

When all units have been initialed by your instructor he/she will record
your grade (Pass). Those students at Mesa Community College who do
not complete the course requirements will be given a grade of "Z", no
credit.

INTRODUCTION

This workbook is an individualized planning guide designed to help you sequentially explore your values, interests, skills, jobs satisfiers, and pertinent career information in order to make an appropriate career choice.

Before you begin the modules, it would be helpful for you to state in writing what you hope to gain from the course so that you can focus on the areas most important to you.

I HOPE TO GAIN THE FOLLOWING:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

A career decision is perhaps one of the most important decisions a person makes in his/her lifetime. To some degree this decision affects all areas of a persons's life. The kind of career chosen directly effects such things as a person's socio-economic level, choice of friends, and the persons's physical and emotional well being.

How much time will you be investing in a job/career? Your first exercise is to figure out the number of actual hours you will be employed before the mandator retirement age. By filling in the appropriate areas of the following formula, you will determine the number of hours you can expect to work. This will refelct the magnitude of the decision you are about to make.

1) The madanatory retirement age is   _____

    Subtract your present age   -_____

    Write your answer here   _____
    (This figure is the number of years
    you have remaining to work)

2) Enter the average number of work weeks
    per year   _____

    Multiply by the number of years you
    have remaining (from Number 1 above)   X_____

    This is the number of weeks you have
    remaining to work   _____

3) Write the average number of hours per
    work week   _____

    Multiply by number of work weeks (from
    Number 2 above) you have remaining   X_____

    This will give you the number of hours
    you have remaining to work   _____

CAREER CENTER VISITATION

Before the self-assessment begins, it would be helpful for you to know that there are resources available to you in the Career Center. Your first task is to tour the Career Center and obtain a stamp in the space provided.

During your visit, pay special attention to the resources listed on page 36 and 37.

_____

Validation Stamp

VALUES

A value is an internal belief or principle which guides and prioritizes a person's actions. What people do and feel about what they do reflect their values.

People tend to be more highly motivated to achieve success in occupations at which they enjoy working and that have the most meaning for them. In like manner, the kinds of job satisfactions that are important to a person are also an indication of what that person values. In exchange for skills, time, and energy given to an occupation, a person can expect to receive compensation or gratification that is most satisfying.

Below is a list of values which influence career decisions. Check those values which you feel are important to you and then arrange them in order of their importance. Place a one (1) next to the value most important to you; place a two (2) next to the value which is second most important, etc.

_____ 1. An economically prosperous life (money)
_____ 2. Opportunity to help other people
_____ 3. Job security
_____ 4. Family security
_____ 5. Opportunity to be creative
_____ 6. A career in which others would look up to me (prestige)
_____ 7. Control of your environment and influence over others (leadership)
_____ 8. Freedom on the job (distant supervision)
_____ 9. Having someone always available to guide your work (close supervision repetitious work
_____ 14. Work independently of others (self-employed)
_____ 15. Something to do in spare time
_____ 16. Doing work that is interesting.

UNIT 2

INTERESTS

As a general rule people spend their free time in activities that bring them some kind of satisfaction, pleasure, or enjoyment. Interest is a feeling which reflects curiosity, satisfaction, pleasure, enjoyment, etc. It is interest that induces a person to choose one activity over another. It is the authors' orientation that knowledge of one's interests is prerequisite to exploring all other components of a good career search.

During the next week, record on the following chart how you spend your time on a day by day basis. This and the succeeding exercise will help you gain an awareness of the choices you make about the utilization of your time. If you spend your working time in an interesting way, your work life will have more meaning and will be satisfying. Of course, the converse is also true, if you do not spend your time in interesting activities your work life will lack satisfaction. While all of the activities you will list might not appear to reflect your interests, they do reflect your choices.

TIME USE CHART

Time	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
6:00							
7:00							
7:00							
8:00							
8:00							
9:00							
9:00							
10:00							
10:00							
11:00							
11:00							
12:00							
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6:00							
7:00							
7:00							
8:00							
8:00							
9:00							
9:00							
10:00							
10:00							
11:00							
11:00							
12:00							

TIME ANALYSIS ACTIVITY

Using the information you gathered in your Time Analysis Chart,
identify the amount of time you spend on activities to which you have
committed yourself and those activities which you have freely chosen.
Write the activities and the amount of time you spend in each activity
on your time analysis chart on the following page.

Committed Time: Activities for which you have committed
a certain number of hours a day or week.
For example - class time, homework,
employment, driving to and from school/ ·
/work, cooking, washing, chauffering
children, cleaning, shopping, or car
maintenance.

Free time: Activities which you have chosen to do.
For example - hobbies, reading for
pleasure, socializing with friends and
any extra time spent on committed
activities such as gourmet meals
rather than plain cooking, or extra
time spend on a research paper over
and above what is required.

TIME ANALYSIS CHART

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
C							
O							
M							
M							
I							
T							
T							
E							
D							
TOTAL TIME							
F							
R							
E							
E							
T							
I							
M							
E							
TOTAL TIME							

1. Since activities reflect interests, look back at your time analysis
   chart. Identify activities both from committed and/or free time
   categories that bring you pleasure, enjoyment; or satisfaction.
   List those activities in the space provided along with any other
   activities you enjoy.

   INTERESTS

   _____

   _____

   _____

   _____

   _____

2. Take three (3) of the above activities and specify what it is about
   each activity that brings you pleasure, enjoyment or satisfaction.

   ACTIVITIES   SATISFACTION

   a.

   b.

   c

   d

   e

3. What changes would you like to make to give your life more meaning
   and satisfaction?

   _____

   _____

4. What might keep you from making these changes?

   _____

   _____

UNIT 3

SKILLS

1. Very often people overlook the skills or abilities they have acquired. This is often true because certain skills are performed with such ease and taken for granted. Skills that are very important on the job are among those often overlooked, like the ability to communicate effectively; to manage ourselves well in relation to authority, time and environment; and the ability to plan and organize; etc.

2. It is important in a career search to focus on the skills we possess and have demonstrated in the past. Not only is it important to identify the skills and abilities we possess, but it is equally important to determine the skills and abilities we most enjoy.

3. In this module, it will be your task to identify skills which you have acquired; which can be used in a variety of work situations. Following are listings of some of the skills; in this exercise put an "X" beside the skills you have used successfully or those in which you have potential.

_____ 1. Organizing	_____30. Remembering
_____ 2. Supervising	_____31. Leadership
_____ 3. Persuading	_____32. Researching
_____ 4. Appraising	_____33. Working with animals
_____ 5. Investigating	_____34. Problem solving
_____ 6. Interviewing	_____35. Athletic ability
_____ 7. Mechanical	
_____ 8. Persistence	
_____ 9. Teaching	
_____10. Working independently	
_____11. Writing	
_____12. Musical ability	
_____13. Analyzing	
_____14. Helping others	
_____15. Dependability	
_____16. Initiative	
_____17. Creativity	
_____18. Resourcefulness	
_____20. Communicating ideas (listening & speaking)	
_____21. Decision making	
_____22. Repairing	
_____23. Selling	
_____24. Calculating (numbers)	
_____25. Reading	
_____26. Meeting new people	
_____27. Developing friendship	
_____28. Handling pressures	
_____29. Handling money	

SKILLS ACTIVITY

In this exercise you will be identfying the skills and abilities you used
to successfully accomplish a job or activity.

There are two columns, under both the work and activities categories,
the left column for each, list job/activities in which you have been
involved. In the next column, list the skills you used to be success-
ful in that job. The skills listed on the previous pages may not
include all the skills you have acquired. The list is to be used as
an example of the kinds of skills to which the authors are referring.

Work Paid or Unpaid		Activities School or Social	
Job	Skills Used	Activity	Skills Used

LOOK BACK AND PLACE AN * BY THOSE WHICH YOU MOST ENJOY

FUTURE SKILL DEVELOPMENT

You have identified many of the skills you now possess and have check-
ed those which you most enjoy. List those skills you do not presently
possess that you would like to develop.

UNIT 4

DATA, PEOPLE, THINGS

Introduction:

In addition to occupational areas, jobs are also classified according to the degree to which the work deals with data, people, and things. Every job requires workers to have some degree of involvement with data, people, and things. The importance you place on working with data, people, and things will help to determine the kind of work you will find most satisfying. These orientations can be defined as follows:

DATA   –   Working with numbers, symbols, information or ideas.

High - Synthesizing, coordinating, analyzing

Med. - Compiling, computing

Low - Copying, comparing

PEOPLE   –   Working with people in varying degrees

High - Counseling, negotiating, instructing

Med. - Supervising, Persuading

Low - Speaking, Signaling, Serving, taking instructions

THINGS   –   Working with tools, equipment, or machinery.

High - Setting up, operating, controlling

Med. - Driving, manipulating, tending

Low - Handling, feeding

DATA, PEOPLE, THINGS EXERCISE 1

The following exercise will help you become more familiar with the data, people, things orientation of a variety of occupations.

Place a "D" in front of the occupations which you feel reflect working primarily with data, a "P" in front of occupations dealing with people, and a "T" in front of occupations dealing primarily with things. You may use more than one letter with each occupation.

_____ 1. Bank examiner
_____ 2. Accountant
_____ 3. Statistician
_____ 4. Medical records clerk
_____ 5. Police officer
_____ 6. School counselor
_____ 7. Engineer
_____ 8. Drafting technician
_____ 9. Drafting technician
_____ 10. Middle manager
_____ 11. Astronomer
_____ 12. Chemist
_____ 13. Realtor
_____ 14. Artist
_____ 15. Writer
_____ 16. Speech therapist
_____ 17. Marriage counselor
_____ 18. Agriculture business
_____ 19. Interior decorator
_____ 20. Electronics technician
_____ 21. Secretary
_____ 22. Auto mechanic

DATA, PEOPLE, THINGS - EXERCISE II

The following exercise will help you determine the degree of import-
ance that data, people, and things have for you and how this can be
applied to a career selection.

In the Student Union there are six rooms where students congregate.
People with the same interests and skills tend to gather in the same
room.   The various groups of people are assembled in the following
rooms.

Room A -   People who prefer to work with objects, machines, tools,
            plants, or animals.

Room B -   People who like to work with data or have clerical
            or numerical ability.

Room C -   People who like to work with people, influencing, per-
            suading, leading or organizing.

Room D -   People who like to work with people, to inform, help,
            train and enlighten them.

Room E -   People who are artistic and like to see a product of their
            creativity and expression.

Room F -   People who like to investigate, analyze, evaluate, and
            solve problems.

Imagine that you have 45 minutes free before you are to go to your
next class.

        1. Which group of people would you enjoy being with the
            most? Which would hold your interest for the longest
            time?

            _____
            Put letter here

        2. After 15 minutes, the group you are sitting with leaves
            for another class. Of the groups remaining, which one
            would you most enjoy being with?
            _____ put letter here

        3. Another 15 minutes elapses and again your second choice
            group of people must leave for a class. You have another
            15 minutes before you also must go to class. Of the re-
            maining groups, you would enjoy spending this time
            with?
            _____ put letter here

KEY

. DATA, PEOPLE, THINGS - EXERCISE II

KEY:

ROOM A	-	Things Orientation
ROOM B	-	Data Orientation
ROOM C	-	People Orientation·
ROOM D	-	People Orientation
ROOM E	-	Things Orientation
ROOM F	-	Data Orientation

What is your present preference for a work orienatation?

_____

Do your three (3) choices in this exercise reflect your stated work orientation preference?

_____

UNIT 5

JOB SATISFACTION

People look for and expect many different rewards from their work. Money isn't everything, as the saying goes. Job satisfaction can be defined as that which we get from a job in return for our time, energy, and skills. Job satisfactions include all the possible pay offs, dividends, rewards, or renumerations derived from a job.

What do you want from a job in return for your time, engergy, and skills? Here is a list of possible job satisfiers which influence career decision. Check the satisifiers you feel are important to you and then arrange those job satisfiers you checked in order of their importance to you. Place a 1 next to the job satisfier most important to you; plase a 2 next to the job satisfier that is second most important, etc. Add to the list any other job satisfiers that are important to you.

_____Prestige

_____Working with others as part of a team

_____Learning new things

_____Seeing something tangible that you have created

_____Being perceived by others as a leader

_____Feeling of accomplishment

_____Freedom to do the job your own way

_____Money

_____Opportunity to demonstrate skills

_____Security

_____Helping others

_____Variety of job activities

_____Opportunity to be creative

_____Feeling of having made a contribution

_____Opportunity to develop my potential

UNIT 6

SUMMARY OF VALUES, INTERESTS, SKILLS AND JOB SATISFIERS

The first units focused on understanding your personal characteristics as they relate to a career search. List your top five (5) choices in each area that are important in your career selection.

	Values		Interests
___	1. _____	___	1. _____
___	2. _____	___	2. _____
___	3. _____	___	3. _____
___	4. _____	___	4. _____
___	5. _____	___	5. _____

	Skills		Job Satisfiers
___	1. _____	___	1. _____
___	2. _____	___	2. _____
___	3. _____	___	3. _____
___	4. _____	___	4. _____
___	5. _____	___	5. _____

In the spaces provided to the left of each number, plase a "D" if characteristic is data oriented, a "P" if the characteristic is people oriented, or a "T" if the characteristic is thing oriented.

Are your personal characteristics mostly Data, People, or Thing oriented?

_____

UNIT 7

EXPANDING CAREER AWARENESS

Now that you have determined the values, interests, skills, and job
satsifiers that are important in your career selection, your next task
is to identify some jobs/careers that will utilize your skills; jobs that
best characterize your interests and values and jobs/careers that will
give you the job satisfaction you desire.

The following activity will help you expand your awareness of the
number of job/career possibilities which might be consistent with your
personal characteristics. Once you are aware of possible choices, you
will then be able to narrow down these choices based on information
derived from your career research.

I.   List the occupations and careers about which you have been
        thinking or in which you have some interest or skills.

II.   In the space below, record the occupations and careers that
        family members and friends have suggested for you.

EXPANDING CAREER AWARENESS (Continued)

III.   Complete a career interest survey. Either the Job-O or
         Major-Minor Finder survey will help you explore your career
         interests. However, neither of these surveys measure your
         ability or aptitude to the task involved in a particular occupa-
         tion; rather they are designed to find job titles or college
         majors to match your needs and interests. · Look at both the
         surveys and decide which would best fit your requirements.

         Job-O -   Primary purpose is to engage in the process of
                   career awareness and career exploration for both
                   professional and technical occupations.

         Major-Minor-Finder - Designed for students who wish
                   to complete four years of college; a self-assessment
                   of career and school interests.

INSTRUCTIONS:

         1.   Obtain the Job-O or Major-Minor-Finder materials from
               the Testing Center located in portable building
               Number 404 in the south part of the campus.

         2.   You will be required to complete the survey in the
               Testing Center so allow about an hour to work with
               these materials:

               Question Booklet--to be left in the Testing Center when
                   finished.

               Insert Folder--for you to take with you when you finish.

         3.   Follow the directions for the survey given on the first
               few pages of the questions booklet. The insert folder is
               to be inserted between pages 8 and 13 of the question
               booklet. Please do not mark anything in the question
               booklet.

         4.   Use any pen or pencil to record your answers on the
               insert folder.

         USE OF RESULTS--SEE ATTACHED

USE OF RESULTS

1. The back pages (Research Page) of both surveys are reproduced on the next two pages. Copy, your results on the appropriate form i.e., page 29 for Major-Minor-Finder or page 28 for the Job-O.

2. The jobs or college majors you found that match your needs will allow you to broaden your list of career prospects and give you a direction to start your career research.

FOR MAJOR-MINOR-FINDER

For each major, a reference page is listed for the Occupational Outlook Handbook (see list of Career Resources on page 29). It is listed in the far right column under OOH page number.

FOR JOB-O

To find out more job facts related to your Job-O results consult the companion booklet, the Job-O Dictionary (also available in the Testing Center). You will find information on definitions of jobs listed in the survey, related jobs, unusual jobs and job characteristics.

JOB TITLE RESEARCH

A. Consider all the JOB TITLES in which you had five or more matches.

B. Choose three JOB TITLES that you like best. Write them in the boxes below. Use the information in this folder to list the important facts about each of the three JOB TITLES.

Job Titles	1. _____	2. _____	3. _____
Number of People Employed	1. _____	2. _____	3. _____
Yearly Number of Job Openings	1. _____	2. _____	3. _____
Yearly Pay	1. _____	2. _____	3. _____
Job Outlook	1. _____	2. _____	3. _____
Kind of Training	1. _____	2. _____	3. _____
Years of Training	1. _____	2. _____	3. _____
Job Cluster	1. _____	2. _____	3. _____

C. Compare the information about the three JOB TITLES, choose the JOB TITLE that you like best, and write it in the box below:

JOB TITLE _____

_____

D. ZERO IN ON THE JOB!
[] Use the OCCUPATIONAL OUTLOOK HANDBOOK
[] Visit a CAREER INFORMATION CENTER
[] Talk to a COUNSELOR
[] Visit people who are ON THE JOB

JOB CLUSTERS
JOB TITLES are listed in CLUSTERS in Column D in this folder. A CLUSTER is a group of jobs that are in the same general field of work.

GENERAL JOB TITLES
Certain JOB TITLES listed in JOB-O are GENERAL JOB TITLES. They are Clergy, Enginnerr, Environmental Scientist, Life Scientist, Physical Scientist, Social Scientist, and Telephone Crafts Worker. See the Occupational Outlook Handbook or ask your counselor for specific JOB TITLES under each of these general titles.

MAJOR-MINOR RESEARCH

A. Look at the MAJORS with which you had the highest number of MATCHES. Of these MAJORS, choose nine in which you have an interest. List them below:

_____ _____ _____
_____ _____ _____
_____ _____ _____

B. From this list, select three majors that you feel BEST match your interests and abilities. Write them in the three boxes below. Use the information in this INSERT FOLDER to list important facts about each major.

College Majors	1._____	2._____	3._____
Related Jobs	1._____	2._____	3._____
Number Employed	1._____	2._____	3._____
Job Outlook	1._____	2._____	3._____
Average Income	1._____	2._____	3._____
Colleges (#) (Offering Major)	1._____	2._____	3._____
Interests, Skills Required	1._____	2._____	3._____

C. Consider the information concerning the three MAJORS. Which one BEST matches your interests and abilities? Write that MAJOR below:
   FIRST CHOICE MAJOR_____

D. Consider a second choice that would complement (go along with) the FIRST CHOICE MAJOR. This might be considered a MINOR. Write it below:
   FIRST CHOICE MINOR_____

E. COLLEGE SEARCH. See your Guidance Counselor, use sources in a Career Center, see COLLEGE CATALOGS, college manuals and other sources to find colleges that offer your MAJOR. Make a list of colleges. It can be from five to ten--or more. Compare the colleges in these areas:
   *Size (small, medium, large?)   *Social and academic reputation?
   *Location (near home, far away)   *Private or public?
   *Cost (tuition, room, board?)   *Accredited? Are credits good?
   *Entrance Requirements(do you qualify?)
   *Scholarship/work possibilities?

F. Consider the answer to the above items for all the colleges you have listed. Which three colleges BEST satisfy your requirements? List below:

   1._____ 2._____ 3._____

BE SURE TO OBSERVE ALL DEADLINES
FOR REQUIRED TESTS AND APPLICATIONS. . . GOOD LUCK!

ORGANIZING YOUR JOB POSSIBILITIES

A group of careers or jobs that have common characteristics are known as clusters or families. Grouping careers in this way will help you see where your career possibilities are concentrated and help you make decisions about choosing an entry level position. Arranging your list of career posibilities into clusters or families can help identify additional possibilities when researching these occupations.

Jobs and careers can also be clustered around such things a (a) interests (for example outdoor activities); (2) skills required for the career; (3) working with either data, people, or things; (4) the kinds of training needed; (5) jobs for a specific industry (these groupings are also listed in the D.O.T.).

In the next exercise you will be clustering your present career possibilities according to the U. S. Office of Education's 15 categories.

Look through the career/jobs you have tentatively thought of, those suggested by family and friends, and those that received the highest number of matches on the Job-O or Major-Minor Finder Survey.

Reocrd under the categories on the next page all the possible careers you have identified.

Business and Office	Math/Science
Communications and Media	Fine Arts/Humanities
Agri. -Business and Natural Resources	Hospitality and Recreation
Construction	Manufacturing
Consumer and Homemaking Ed.	Transportation
Environment	Personal Services
Health	Public Services
Marketing and Distribution	

NARROWING DOWN

From all of the careers you have identified up to this point, choose
the five (5) occupations that seem most interesting and appropriate
for your.

_____   _____

_____   _____

_____

UNIT 8

OCCUPATIONAL INFORMATION

You have now identified several careers/jobs for which you will need
sound and accurate information in order to narrow your career selection
to the top three. There are many resources available that will provide
this information.

Using these resources (listed on pages 36-37) complete the Occupational
Information chart. Write the names of the five occupations you have
identified and record your responses to the questions listed on the left
side of the chart.

OCCUPATIONAL INFORMATION

Name of Occupation

_____

_____

Type of Training/
  schooling

_____

How much training/
  schooling?

_____

What are their licensing
or certification require-
ments?

_____

What is the earning
potential?

_____

What is the employ-
ment outlook? (stable,
decreasing, increas-
ing)

Name of Occupation

Is there a specific
geographical location
for the job?

Name some related
jobs.

Name the skills
required for the job

Describe the working
conditions (work hours,
overtime, Sunday,
uniforms, supervision,
etc.)

What is the degree of
data, people or things
orientation? (High, Low
or Medium)

Name of Occupation

_____

_____

Describe the work
setting

Describe the duties
involved in the job

_____

_____

RESOURCES

Occupational File Folders
The occupational file is the major source of information in the Career
Center and utilizes the Dicationary of Occupational Titles (D.O.T.) code
number devised by the U. S. Department of Labor. Jobs are filed
according to the occupational designation (first three (3) digits) of the
nine digit DOT Code thereby offering ready access to related jobs in
the same occupational area. The file folders house information from a
variety of sources for any given occupation and are crossed referenced
with audio-visual aids in the Career Center.

Dictionary of Occupational Titles
The Dictionary of Occupational Titles is used to find a code number
identifying the occupational area and data, people, things orientation
for specific occupations. It includes an alphabetical listing of approxi-
mately 22,000 different occupations and a job description for each.

Guidance/Information System (G. 1. S.)
The Guidance Information System is a computer-based system which
provides Career and College information. The G.1.S. provides job
descriptions, worker traits and characteristics, job characteristics, a
list of similar jobs and where to write for more information. It can also
provide information on the local employment scene by listing jobs which
were filled in Arizona last month through the Department of Economic
Security (employment service) stating where the jobs were located, and
how much they paid.

Occupational Outlook Handbook
The Occupational Outlook Handbook is published yearly by the U. S.
Department of Labor. It describes what workers do on the job, the
training or education needed, and some indication of the availability of
jobs in the next ten years.

Job Lab 2 The Job Lab contains 635 cards. Each card describes aspects
of a single career like nature of the work, duties and responsibilities,
working conditions, earnings, and advancement. It is arranged in
alphabetical order.

Occu-File The Occu-File contains approximately 300 occupational briefs
organized into three educational level requirements: Entry (for immediate
employment); Vocational-Technical (occupations believed to be the
fastest growing areas of employment); College (choices for academic
study, employment potential, and directions for upward mobility.)

RESOURCES (continued)

Occupational Explorations Kit
The Occupational Exploration Kit contains illustrated briefs that provide
a description of individual jobs including qualifications and training,
earnings and outlook, and selected references. The briefs are filed in
numerical order.

Career Monographs
Career Monographs take a rather comprehenisve look at major career
areas. Each area is covered in about twenty pages of literature. The
career monographs also present some rather unique careers that are not
presented in other sources.

Audio-Visual Aids
There are many sets of filmstrips with accompanying audio cassette
recordings which present career information in an interesting manner.

SUMMARY CHART

The chart on the following page will give you an opportunity to summarize all of the data that you have compiled to this point. The chart will provide a means to rank order your top three occupational choices.

1. As a result of research gathered for the occupation information chart identify your top three choices and record them on the summary chart in the appropriate place. On the left side of the summary chart record your values, interests, skills, jobs satisfiers, and DPT from the summary chart on page 24.

2. Study the values you listed and determine which of the occupations are more consistent with them. Place a check mark in the space provided opposite each of the five (5) values if the occupation satisfies that value.

3. Follow the same procedure for interests, skills, job satisfiers, and your Data, People, and Things orientation.

4. Total the number of check marks for each occupation column and record in the space provided.

5. From these totals and from your intuitive feeling about these three (3) occupations, select your top three (3) choices and record them on page 37.

SUMMARY CHART

TOP THREE
OCCUPATIONAL
CHOICES
_____

Values: _____
_____
_____
_____
_____

INTERESTS: _____
_____
_____
_____
_____

SKILLS: _____
_____
_____
_____
_____

JOB SATISFIERS: _____
_____
_____
_____
_____

ORIENTATION TOWARD _____
DATA
PEOPLE _____
THINGS _____

TOTAL
_____

MY TOP THREE OCCUPATIONAL CHOICES:

1. _____

2. _____

3. _____

APPENDIX D

INVITATION LETTER TO PARTICIPATE

Dear New Student:

I am Charlie Mitchell, a counselor at Mesa Community College, and am in the process of doing some research on two courses that we offer at the college. The purpose of this letter is to invite you to participate in the research. More spcifically, here is what the research is all about. Mesa Community College offers two self-paced, individualized courses in which the student works through a workbook, on his own, with little help from a counselor or instructor. The purposes of the courses are to help students define why they are in college, uncover what they want from their college experience, learn how to achieve their educational goals, and discover how their educational goals are related to a career selection. The research project will determine what impact the courses have on a student's academic orientation, academic motivation, and whether or not students feel more control over the factors that affect their success in college.

Two semester hours of college credit will be awarded during the fall semester at no cost to those full-time students who complete the courses' requirements. The courses will take approximately 15 hours of time over a 3 week period.

All participants in the research will be new students at Mesa Community College who have volunteered to take the courses. Participants will have the freedom to withdraw from the research at any time with no ill will or penalty. All questions regarding the nature and procedures of the research will be answered fully and completely. All data gathered in the research will be confidential, but all participants will have access to the findings and conclusions of the project.

There will be a meeting on June 27, at 7:00 p. m. in the Nursing Lecture Hall to explain the research project fully and to distribute materials to those students wishing to participate.

If you would like to participate in this research project for two semester hours of college credit, telephone 833-1261, extension 243, or complete the attached form and return it to: Charlie Mitchell, Mesa Community College, 1833 West Southern Avenue, Mesa, AZ 85202. I will greatly appreciate your effort.

Sincerely,

Charlie Mitchell
Counselor

ALL INFORMATION YOU PROVIDE WILL BE
HELD CONFIDENTIAL

Name_____

Address_____

Telephone Home_____

Work _____

Will you be a full time student at Mesa Community College in
the fall?   Yes_____   No._____

After you return this form you will be contacted by the
researcher to confirm your interest and to answer any questions
you might have about the research.

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