

THE EFFECTS OF A CAREER EXPLORATIONS  
PROGRAM ON CAREER  
MATURITY

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## PREFACE

This study is an analysis of the effects on career maturity in juniors and seniors of an earlier intervention strategy, a junior high career explorations course. The primary purpose is to determine whether the career explorations course produced a change in the students' maturity levels and their process of forming tentative occupational choices. The respondents who took part in the study were all students in the Bartlesville Public School System and the results of this study should not be generalized beyond this scope.

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## CHAPTER I

### INTRODUCTION

#### Background Information

Since the concept of career education was first formally introduced in 1971, much activity has been generated in educational circles in order to implement viable career-oriented intervention strategies. Many school systems have been successful in including portions of the career education concept into their curricula in some form or another.

Because of the vast investments in time, staff involvement, and funds necessary to integrate this newly-created concept into a functioning school system, decisions regarding inclusions of career education should be based upon the broadest data base available. Unfortunately, due to the youth of career education, little research has been conducted to test the effectiveness of its intervention techniques on students in American school systems.

Career education was verbalized first in 1971 by the then Commissioner of the United States Office of Education (U.S.O.E.) Sydney Marland, according to Smoker (25). Since that time many educational leaders have attempted to define, delineate, and focus upon the goals of career education. One of the most prolific and effective writers on the topic, Kenneth Hoyt, et al., (17) has broken career education into five components that act as intervention strategies upon the phases of vocational maturation:

- (1) AWARENESS of work roles in society.
- (2) EXPLORATION of work roles that might be appropriate for the individual.
- (3) VOCATIONAL decision-making (occupational choice).
- (4) ESTABLISHMENT, including preparation and assumption of a work role.
- (5) MAINTENANCE, gaining satisfaction and meaningfulness with the primary work role assumed.

It is interesting to note that these strategies closely follow Super's (29) outline of "vocational life stages" or vocational development.

Prompted by the writing of Ginzberg and others (12), vocational counselors viewed the occupational choice as a part of a developmental process that took 6-10 years and was largely irreversible. This produced the wait-and-see attitude in counseling and guidance that promoted the philosophy of having the client put off an immutable decision until all the facts were known. According to Hoyt (17):

It (career education) replaces the continued postponement of career goals with encouragement of the choice of tentative goals which can be changed whenever necessary, but which serve both to motivate learning and foster maturity of purpose (p. 24).

In 1970-71, the Bartlesville School System implemented a career explorations program as an exemplary program funded in part with federal monies through the State of Oklahoma Department of Vocational and Technical Education. The program was designed as a career education intervention strategy to:

- (1) Instill a positive attitude toward the world of work;
- (2) Bring about positive work attitudes;
- (3) Exploration of career options, and

(4) The formation of early occupational choice.

Charged with this responsibility, two teachers, in cooperation with the counseling staff and other faculty members, wrote the curricula for the eighth grade (one semester) and the ninth grade (two semesters) courses.

The courses were offered for the first time in the fall of 1970, and methods were enlarged in 1971-72 to include a simulation (Work-Sim) format that attempted to transform the typical classroom into a "job situation" with the teacher assuming the role of "manager" and the students becoming "employees."

While the backgrounds and aptitudes of the students varied greatly, all pupils could achieve a sense of accomplishment by doing various types of "work." A top ten Most Valuable Employees list was posted after every "payday" and the results were carried in the school newspaper. Several students managed to stay on the elite top ten list most of the time and received "A's" in the course. At the end of the academic year the Most Valuable Employee was named and received a trophy and recognition in the city newspaper and at the awards assembly at school.

Supportive methods used included: games, field trips, community resource persons, and business communications. Field trips and guest speakers were also employed to provide exploratory experiences in order to reveal the myriad of options available for career possibilities. Games were also used in the classroom to stimulate thought and help provide motivation for learning. Especially successful were 3M's "Stocks and Bonds" (26) and a revision of Milton & Bradley's "Concentration" (6) (used for occupational vocabulary development). After a two-week instructional block in writing business communications, trade and professional associations were involved by assigning the students to write for

career information in areas in which they had potential interests.

At the end of the first semester of the ninth grade section, the students were required to turn in a term paper expressing their tentative career choices and describing the duties, qualifications required, education necessary, and working conditions of their chosen occupation. Of course, this was preceded by extensive investigation of the concept of self early in the year. One tool used to help crystallize this concept was the Kuder Personal Preference Record (18).

The local business community was used to help the students gather information for this term project, as the students were asked to interview a person holding the position upon which they had decided. The English Department cooperated by accepting well-written career reports as credit for its courses.

A Careers Club was formed to supplement and support the terminal objectives of the course and promote student interest and motivation. During the first year of operation, the students raised money and completely carpeted one of the classrooms (a former study hall) using carpet samples and scraps. The second year the club held a car wash to raise the money to buy paint and then painted this classroom.

Starting with two teachers and approximately 140 students, the program grew and flourished. As an elective, the course was not required, and the students ranged from the educable mentally retarded to the "gifted." Enrollment for the 1974-75 school year was 240 students.

With the extreme emphasis upon early tentative occupational choice, this intervention strategy may have had some measurable effect upon the students involved.

### Statement of the Problem

The problem this study centered upon was a partial evaluation of the effects produced by the Bartlesville career explorations program on its participants. The students who were enrolled in this class for the school years 1972-73 and 1973-74 were juniors and seniors in high school at the time of this study. If the career explorations program was successful in the establishment of the need for occupational decision-making, more students with career explorations class experience would have formulated tentative occupational choices than their classmates without this experience. They also should have experienced some measurable gains on their career maturity attributable to their career explorations program experience.

### Purpose of the Study

The purpose of this study was to compare the students having the career explorations background with their classmates to determine whether they had formed more career decisions than their peers and whether there was any evidence that their career maturity had been positively influenced. This study would produce valuable insights into the effectiveness of an ongoing program. If there was no significant difference between those students having taken the career explorations class and those who did not, then changes in the present curriculum could be implemented in order to strengthen the students' experiences and meet the program's terminal objectives for the Bartlesville School System. By analyzing the differences in the two groups' decisions, attitudes, and opinions, improvements and changes could be integrated into the present career explorations program.

### The Hypotheses

The hypotheses for this study were:

- (1) There is no statistically significant difference between the career explorations group and their peers in the indication of having made tentative occupational choices.
- (2) There is no statistically significant correlation between the career explorations program experience and the career maturity of students.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Vocational Development Theory and Career Maturity

The need to identify factors in making an occupational choice and the wisdom or realism of that choice has been evident in a number of studies dating back to Super's, et al. (27) Career Pattern Study begun in 1951 with 200 ninth grade subjects continuing through the subjects' 25th birthday. During the progress of this study Super (28) had introduced the concept of career maturity to mean "...the place reached on the continuum of vocational development from exploration to decline" (p. 153). Super, et al. (27) later hypothesized that there were five dimensions through which vocational maturation develops: (1) orientation to occupational choice; (2) information and planning; (3) consistency of occupational choice; (4) crystallization of traits; and (5) wisdom of vocational preferences. An individual's career maturity could be defined along these dimensions in relationship to age or the behavior of others.

In 1958 Gribbons and Lohnes (14) conducted another longitudinal study of eighth grade students and their "Readiness for Vocational Planning." Although findings were largely inconclusive, the career development process was shown to be neither random nor haphazard.

Perhaps the most ambitious research effort in this area, Project Talent, also a longitudinal study, was begun in 1960 by the American Institute for Research under the direction of John Flanagan (10). Project Talent gathered data from 44,000 students at several grade levels who constituted a representative sample of five percent of American high school students. One of the objectives of the primary study was to identify determinants of vocational plans and choices.

The Vocational Development Project, of central importance to this study, was conducted by Crites (7), in which he studied a cross-sectional group of 2,822 students from grade five through grade twelve, standardizing the Vocational Development Inventory which was later named the Career Maturity Inventory (CMI). Crites concluded that there was a definite indication that the Vocational Development Inventory measured the vocational maturity of students, as there was a statistically significant difference between all grades.

In the past, several investigators found that as children grow up, occupational choices slowly lose their tendency toward fantasy. Lehman and Witty (19) noted the choices made by children at puberty contain more realistic elements than earlier. Threlkeld (30) found that realistic choices tend to be made in college but suggested the importance of the exploration stage which precedes crystallization of occupational choice.

During the last 25 years much effort has been expended by researchers, guidance counselors, psychologists, and other educators in the formation of a valid model of vocational development. Ginzberg and associates (12) formulated a pattern that defined occupational choice as a process that takes 6-10 years, is basically irreversible, and is



comprised of subjective elements with opportunities and limitations of reality.

Super (27) made the observation that vocational development is a process that can be broken down into the vocational life stages of (1) growth, (2) exploratory, (3) establishment, (4) maintenance, and (5) decline, and that occupational choice is actually the resultant effect of a whole series of choices. He further postulates that vocational maturity is a quantifiable profile composed of concern with choice, specificity, consistency, crystallization, and wisdom of preferences. Following Super's line of thought, Tiedeman and associates (31) basically agreed by referring to vocational development as "the aspects of the continuous unbroken flow of a person's experiences that are of relevance to his fashioning a work identity" (p. 2).

#### Intervention Strategy Studies

Specific studies investigating the effects of intervention techniques, such as counseling and occupational information programs, at various age levels have experienced varied results.

Sixth graders were studied by Shirts (23) on a pre-test and post-test basis. The experimental group had played the Life Career Game (4). The results of this comparison were not statistically significant. Schmieding and Jensen (22), in a study of the effects of an eight-week occupations class of American Indian juniors and seniors, also found no statistical difference between the experimental and control groups of students. Their conclusion was "...it would appear that short-term treatment has a limited influence on firmly established impressions and attitudes" (p. 122).

One study on intervention strategies producing positive results was conducted by Goodson (13). Using three experimental groups, a control group, and pre-test, post-test design "gains" analysis, Goodson determined that there were statistically significant differences between the experimental groups and the control group. The experimental groups of first semester freshmen at Brigham Young University were divided into a large group who received occupational and educational information, a large group receiving occupational and educational information as well as a self-analysis of pre-test scores, and a large group divided into segments of seven members each for informal presentation of occupational and educational information as well as a self-analysis of pre-test scores.

Three studies--Asbury (1), Bovee (5), and Gilliland (11)--using the Career Maturity Inventory attitude scale, developed initially as the Vocational Development Inventory by Crites (7), showed counseled students averaged higher scores on post-test than non-counseled students.

One study is worthy of note although it was not directly concerned with the criterion variable of vocational maturity. Barker, et al. (2) found that the experimental group of tenth grade vocational students scored significantly higher on all course content tests than their control group classmates who were not exposed to the exploratory occupational and educational information sessions.

#### Methodology of Previous Research

In the past, data collection has relied strongly on test data (achievement, aptitude, and I.Q.). More recently the trend has been toward attitude inventories combined with, or independent of, other

test data. Project Talent, Flanagan, et al. (10), utilized a comprehensive battery of attitude and achievement tests, interest and personality inventories, and biographical questionnaires.

Gribbons and Lohnes (14), in their Emerging Careers Study, used an interview schedule or questionnaire and developed the Readiness for Vocational Planning Scales from the results.

Shirts (23), Schmieding and Jensen (22), and Goodson (13) all used the Vocational Development Inventory developed by Crites (7) in their separate studies of evaluating the effects on vocational maturity of differing intervention techniques.

Statistical methods varied greatly, dependent on the classes of data gathered, and were generally consistent with Siegal's (24), as well as Guilford and Fruchter's (15) interpretations for appropriateness.

#### Design Considerations

One area that was outlined as hazardous and capable of ameliorating researched effects was the combination of different grade level students for analysis of vocational maturity (7) in reference to Schmieding and Jensen's (22) study.

Another very real consideration to be taken into account was also cited by Crites (7) regarding a study showing no statistical significance by Myers (20). Crites states, "...it is difficult to conclude whether this finding was attributable to the ineffectiveness of the counseling or some extraneous variable, since these were all confounded in the treatment" (p. 54).

### Summary

While there has been extensive research striving to define a vocational development theory and several longitudinal definitive research efforts on vocational maturity, there appears to be a need for additional practical research utilizing these concepts and identifying successful intervention techniques that could enhance the individual's vocational development and maturity. In our present day world of quickly changing technology, the area of wise occupational choice considerations should be facilitated and advanced to bring both relevancy and practical aspects into focus for the individual student. In this manner the educational system could better prepare the individual for the transition from school to work.

## CHAPTER III

### METHODOLOGY

#### Definitions

Career Explorations Program: indicates the exemplary funded program implemented at Central Junior High School in Bartlesville, Oklahoma, in 1971 and currently being locally funded there. The purpose of the course was to offer one hour of instruction per day, on a semester basis for eighth graders and a two-semester basis for ninth graders.

Tentative Occupational Choices: an indication of having formed a vocational decision.

Intervention Strategy: any program of guidance or instruction that serves to promote individual vocational development.

Career Maturity: vocational behavior as measured by the Career Maturity Inventory Attitude Scale.

#### Assumptions

For purposes of comparing the group of students having had career explorations in the ninth grade responses with their classmates, it was assumed that the data was nominal in nature.

The career explorations group's vocational maturity level was compared to its peer groups' assuming interval level data was obtained from the Career Maturity Inventory Attitude Scale scores.

It was also assumed that the sample from which data was gathered reflected a true representation of the population or populations involved.

An assumption that was of primary importance to this study was that the eighth grade respondents were sufficiently representative of the juniors and seniors at that earlier age; thus permitting valid comparisons between the treatment and control groups.

#### Selection of Subjects

As the ninth grade career explorations program had as its primary terminal objective the formation of tentative occupational choices, it was decided that it would be the group of students who had this experience (rather than the eighth grade career explorations program) that would comprise the experimental group for this study. It should be noted that only those students who had taken and completed successfully the ninth grade career explorations program were included. This was accomplished by manually and visually comparing respondents' replies to the "careers, no careers" item with the class rolls obtained from Central Junior High. For a complete overview of the study, see Figure 1.

An attempt was made to collect data on the entire population of College High School. As Central Junior High School is the feeder institution for College High School, all of the students who participated in the career explorations class for the academic years 1972-73 and 1973-74 were enrolled there as juniors and seniors (with the exception of those no longer attending school or those who had moved from the system).

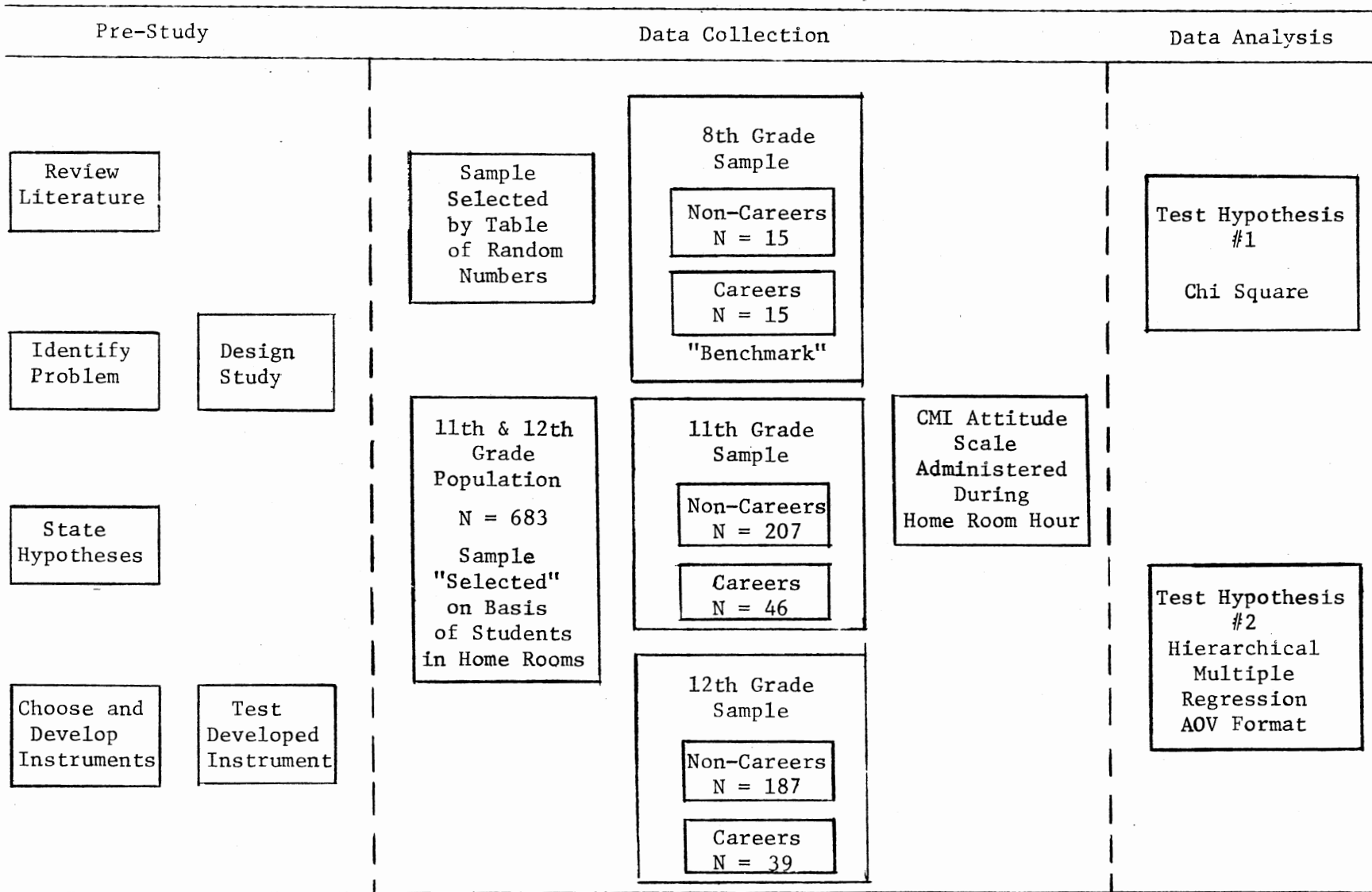


Figure 1. An Overview of the Research Design

In order to establish a "benchmark" estimate of the career maturity of students enrolled in the career exploration program versus those who chose not to enroll, a table of random numbers (21, p. 544) was used to select a small sample of both junior high groups, those enrolled in ninth grade careers and those not enrolled. This sample represented students enrolled for the next academic year but not currently involved in the career explorations course.

#### Collection of Data

As the Bartlesville Public Schools had permitted use of class time for the collection of data and had furnished a list of home rooms in which juniors and seniors were enrolled, it was determined that the most efficient method to collect the data would be to have the home room teachers administer the instrument. In order to insure that proper administration procedures were followed in the collection of the data, a meeting with all the home room teachers involved was scheduled on the day preceeding the actual administration of the instrument. A makeup meeting was also scheduled on the following morning to insure that 100 percent of the home room teachers involved could receive the same directions for administration of the instrument.

The date set for collection of the data was coordinated with College High School so as to avoid conflict with extra-curricular activities that could further reduce the size of the sample obtained. Thus prepared, the sample size resulting was 479 from a population of 683 junior and senior class members.



## Instrumentation

A short questionnaire was developed to provide demographic information and to determine whether the respondents had made a tentative career choice. It was field-tested on a small group,  $N = 30$ , of C.E. Donart High School (Stillwater, Oklahoma) students to determine readability and clarity. (See Appendix B.)

The primary data gathering instrument was the Career Maturity Inventory Attitude Scale (CMI) developed by Crites (See Appendix B) under the original name of Vocational Development Inventory. The criteria used in the selection of the Career Maturity Inventory Attitude Scale were: first, that it was brief enough to be administered in one class period; second, that it was a standardized instrument that reportedly tested the variable of career maturity of students in grades six through twelve; and third, other researchers had used it in similar intervention strategy studies.

## Description of the Instrument

The Career Maturity Inventory Attitude Scale is constructed to survey attitudes central to career decision-making. The instrument contained 50 true-false items that reportedly assess the career maturity level of young people (grades six through twelve) by addressing several areas of attitudes, i.e.:

- (1) Occupational decision-making
- (2) Decisive/Indecisive
- (3) Work attitudes
- (4) Motivation for work.

The following item is representative of the types contained in the Career Maturity Inventory Attitude Scale, Crites (8): "A person can do any kind of work he wants as long as he tries hard."

The forced choice necessitated by the true-false (agree-disagree) nature of the instrument was designed to produce the greatest difference possible between the responses of the mature and immature individuals within the relatively brief framework of the 50 items.

#### Reliability

Crites (8) reported the reliability of the Career Maturity Inventory Attitude Scale obtained an internal consistency estimate (using the Kuder-Richardson Formula 20) of coefficients on grades six through twelve that ranged from 0.65-0.84 with an overall mean of 0.74. While the stability factor was expected to vary with age, the Career Maturity Inventory Attitude Scale appeared to fall within a range that allowed "...maturational variance but high enough to establish systematic measurement of the variable being quantified." The  $r$  reported was 0.71 for 1,648 subjects, grades six through twelve, tested and retested over a one-year period. No equivalence coefficients were available.

#### Validity

Content validity was determined using two procedures. The first method was the logical approach. First, 1,000 items were deduced and developed from central concepts in career development theory. Using Flanagan's (10) procedure for initial standardization, this pool was reduced to 100. Crites (8) states: "This constitutes presumptive evidence, therefore, that the (CMI) attitude scale samples content that

is theoretically relevant and representative" (p. 15). Using ten expert judges (five male and five female counseling psychologists) Hall (16) found a 0.74 interjudge agreement on the Career Maturity Inventory Attitude Scale key for the most mature responses to the 50 items. Thus the Career Maturity Inventory Attitude Scale appeared to have acceptable content validity.

#### Data Preparation and Verification

The data was gathered on two basic forms:

- (1) The answer sheet for the Career Maturity Inventory Attitude Scale
- (2) The self-generated demographics form.

These two forms carried an identification number to insure correct data processing card encoding.

A format was devised for the numerical encoding of all the information concerning dependent and criterion variables onto data processing cards. This format was: Card Columns (C.C.) 1 and 2, grade in school; C.C. 3, sex; C.C. 4-6, identification numbers; C.C. 7, career explorations program experience; C.C. 8, tentative occupational choice; C.C. 9, socioeconomic status; C.C. 10, plans for after high school graduation; C.C. 11 and 12, Career Maturity Inventory Attitude Scale raw score; and C.C. 13, election of the ninth grade career explorations program (this was necessitated to analyze the eighth grade sample).

After preparing the data cards, two methods were used to verify the correctness of the encoded data. First, an 80-80 listing was generated and checked closely to reveal any readily discernible discrepancies. Then, every tenth data card was spot-checked against original data

gathering forms. There was one error discovered in the 51 cards visually verified in this manner, for an error rate of less than two percent (1.9607 percent). This error rate was considered acceptable and the program runs begun.

### Analysis

Two separate statistical methods were used to test, compare, and relate the resulting data. The assumptions of nominal level information on occupational choice or no choice precluded a statistical method more robust than the chi square, thus it was chosen to test the first hypothesis. This choice was generally supported by Guilford (15).

Chi square is used with data in the form of frequencies. One important feature of chi square is its additive property, which makes possible the combination of several statistics or other values in the same test. Thus, a hypothesis involving more than one set of data can be tested for significance (p. 195).

In order to test the second hypothesis, career maturity's relationship to the career explorations experience, the multiple correlation statistic was chosen. It was determined that this technique reported in an analysis of variance format could reveal several important aspects of the dependent variables' relationship and contribution to the criterion variable. First, the contribution of each independent variable would be reported. Second, this statistic could also partial out contributions shared with other independent variables to identify the uniqueness of each contribution. Third, F values would be reported to ascertain what the probability would be to obtain the same F values by chance.

This selection of a statistic is largely supported by Guilford (15).

The coefficient of multiple correlation indicates the strength of relationship between one variable and two

or more others combined with optimal weights. The multiple correlation is related to the intercorrelations between independent variables as well as their correlations with the dependent variable (p. 360).

### Limitations

The reader must note that the grouping of students in their second hour classes placed several grade levels together, and while the College High School administration was extremely cooperative, it was apparent that a large number of juniors and seniors were not included in the study. Therefore, neither controlled randomization nor testing of the total population was achieved.

Further limitations on the study were imposed by the curriculum content, length and time of course, and methods of instruction used in the career explorations program (the independent variable or intervention strategy that was central to this study).

As the Career Maturity Inventory Attitude Scale was the primary data gathering instrument, the readers should evaluate the results of this study in the light of its limitations and effectiveness.

This study was conceived post-facto, therefore it was impossible to include in its design the pre-test control factor. This should not, however, entirely negate the results as inclusion of a large control group should overcome much of this limitation.

The results of this study pertinent to the career explorations program should not be generalized beyond the population of the junior and senior classes at College High School in Bartlesville, Oklahoma, as the career explorations program as an intervention strategy was only available to this population.

For an outline of the entire study design see Figure 1.

## CHAPTER IV

### RESULTS

#### Return Rates

The return rates for the study were expected to be in the 85-90 percent range as permission was obtained from the Bartlesville Public Schools to administer the instrument to the entire junior and senior classes during the home room hour. Several factors intervened, however, resulting in a lower respondent rate than was anticipated. The breakdown of the respondents showed 70.87 percent (253 out of a total class of 357) of the junior class actually participated in the study while data was collected on 69.33 percent (226 out of a total class of 326) of the senior class.

Of the 116 juniors and seniors who had successfully completed the career explorations program, 85 (73.28 percent) participated as respondents and served as the experimental subjects in this study. It appeared from observation that the percentages of participants representative of all the groups were close enough so that any unintentional bias would not have too great an ameliorating effect on the results.

After analyzing the returns and the structure of the two classes, it was determined that, in addition to the students who were absent on the day that the data was collected, another group of students were enrolled in widely-scattered home rooms with the majority of the classes made up of sophomores.

The researcher had no control over the total number of students reached, as the Bartlesville College High School administration provided the list of home rooms (See Appendix C) to be sampled and all of these classes were included in the study.

The sampling of the eighth grade students was obtained with the permission and cooperation of Central Junior High School. Both groups of respondents, those who had elected to enroll in the ninth grade career explorations program and those who had not, were selected by matching student numbers to a table of random numbers (21, p. 544). The N for the eighth grade students was limited by the low number of students who had elected to enroll for the ninth grade career explorations program (only 23 had elected the career explorations course) and it was determined to match these career explorations students with an equal number of randomly selected non-career explorations students. Thus, only 30 respondents were selected at the eighth grade level.

#### Data Summary

The sample size of 509 respondents was comprised of 30 eighth graders who had pre-enrolled for their ninth grade year. Choosing this sample on the basis of pre-enrollment was necessary to determine whether election of the career explorations program correlated with either low or high career maturity within the total population. The remaining grade distribution of the sample was made up of 253 juniors and 226 seniors.

By sex, the sample broke down almost equally (257 male and 252 female).

The socioeconomic status of the respondents' parents was determined by matching the respondents' replies on the item to the occupational structure designed by Duncan (9, pp. 122-123). Additionally, Duncan's occupational structure listing of 100 classes was divided into six categories to offset the effects of a small N on the results. It was reasoned that the 100 categories originally outlined in the Duncan work would certainly have numerous empty cells when submitted to statistical analysis, therefore, the 100 occupational classifications were subgrouped. (See Appendix C.)

The subgroupings followed this design: Duncan rated occupations 0-19, category six (unskilled); 20-34, category five (semi-skilled); 35-49, category four (skilled); 50-64, category three (mid-management/technician); 65-79, category two (management); 80-96, category one (professional).

By socioeconomic status, the N for the sample was reduced to 388. as 121 replies were either unencodable due to vague job titles or the item was omitted by the respondents. The categories of socioeconomic status and their corresponding N's were: professional, 121; management, 79; mid-management, 83; skilled, 33; semi-skilled, 21; and laborers, 51. Refer to Table I for a cross-comparison of career maturity between the classes of socioeconomic status.

The two variables designated for special attention by the hypotheses, occupational choice and the treatment course career explorations, appear in detail in Tables II and III. Briefly, however, occupational choices were indicated as having been made by 314 respondents while 187 signified "no choice" and 8 replies were missing. (See Table II.)



TABLE I  
 CAREER MATURITY MEANS WITHIN CLASS:  
 SOCIOECONOMIC STATUS

Socioeconomic Status Group	N	CMI Mean	Percent of Total	Standard Deviation
Professional	212	37.43	23.8	5.63
Management	79	38.30	15.5	3.77
Mid-Management & Technician	83	37.40	16.3	4.38
Skilled	33	38.52	6.5	4.49
Semi-Skilled	21	37.05	4.1	5.13
Unskilled	51	35.14	10.0	6.25
Missing Data	121	-	23.8	-
Total	509	-	100.00	

TABLE II  
 OCCUPATIONAL CHOICE AND CAREER MATURITY

Choice/ No Choice	N	CMI Mean	Percent of Total	Standard Deviation
Yes	314	38.48	61.69	4.75
No	187	34.66	36.74	5.46
Data Missing	8		1.57	
Total	509		100.0	

A breakdown of the intervening strategy, career explorations program, contained 85 respondents who had taken the course, 30 who had not yet had the opportunity to do so (eighth grade students), and 394 who had not taken the career explorations program. (See Table III.)

TABLE III  
CAREER EXPLORATIONS COURSE  
AND CAREER MATURITY

Career Explorations	N	CMI Mean	Percent of Total	Standard Deviation
Yes	85	36.98	16.70	4.27
No	394	37.50	77.41	5.13
Eighth Grade (pre-ninth grade)	30	31.30	5.89	7.61
Total	509		100.00	

As shown in Figures 2 through 4, the means of the career explorations program students appeared to start in the eighth grade 4-5 points below the non-career explorations program control group and moved closer in the 11th and 12th grades. However, this should not imply that this relationship and movement of the means was statistically significant as these means were close enough to fall within the range of standard deviations at all three grade levels.

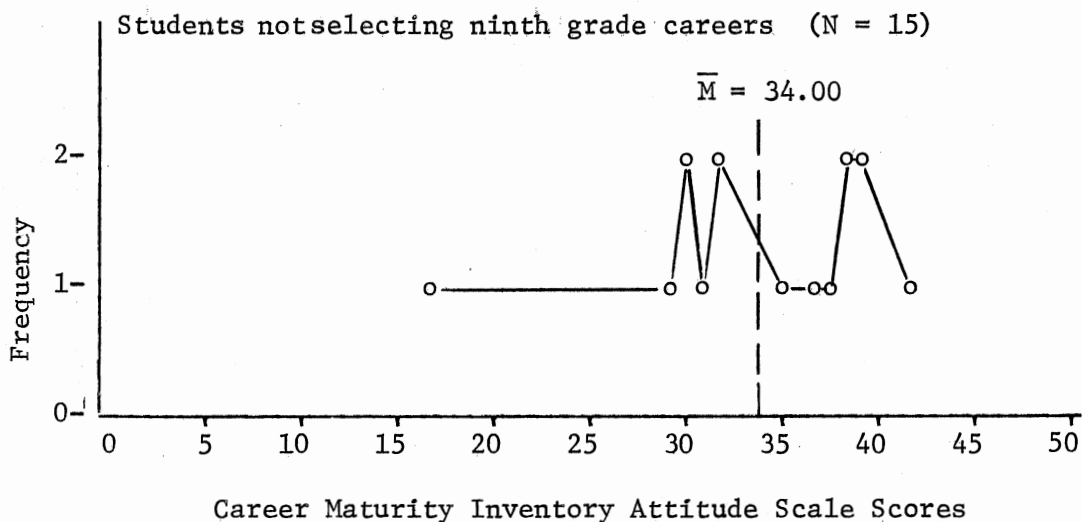
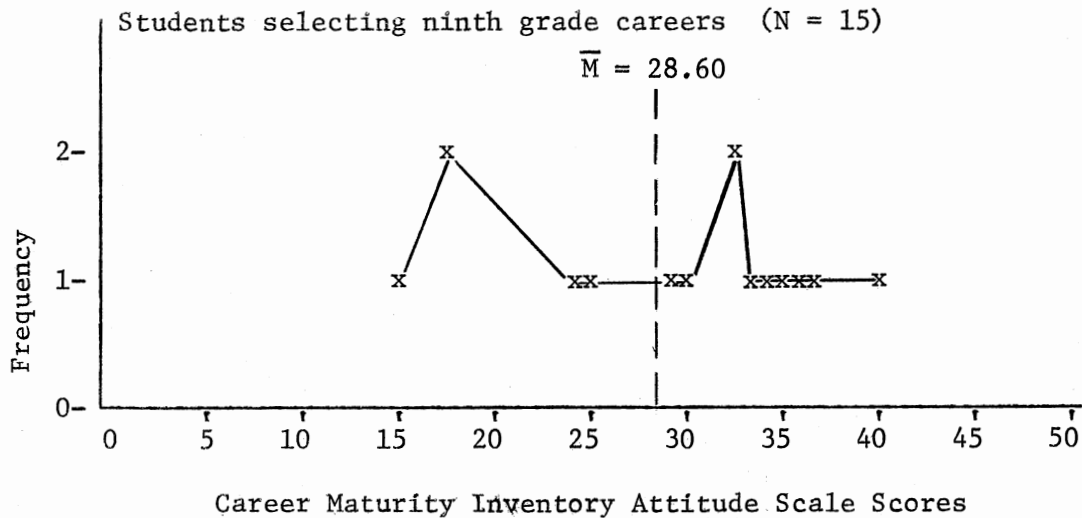


Figure 2: Histogram CMI Scores, Eighth Grade

### Results of Analysis

The hypotheses to be tested in this study were:

- (1) There is no statistically significant difference between the career explorations group and their peers in the indication

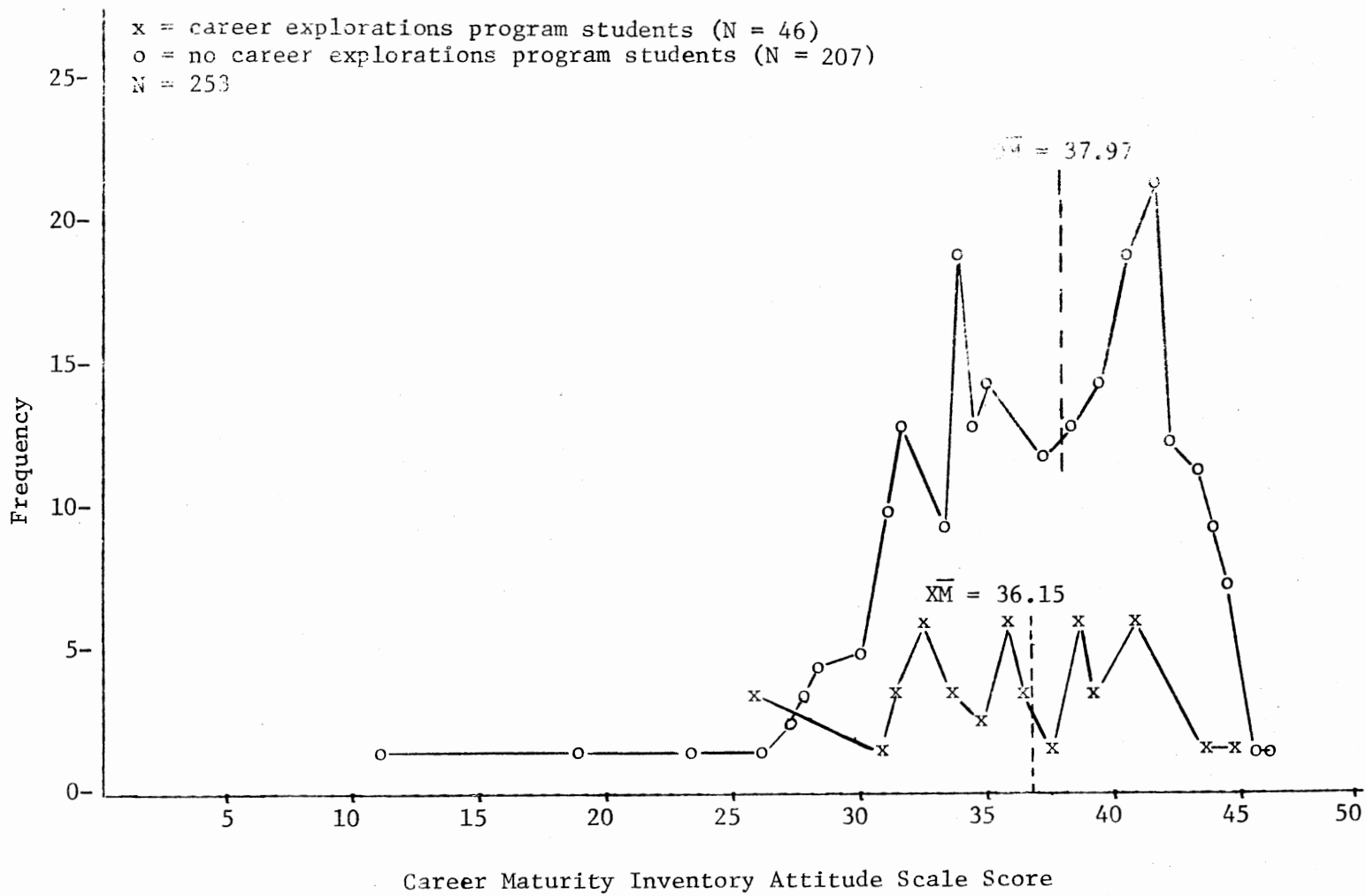


Figure 3: Histogram CMI Scores, 11th Grade

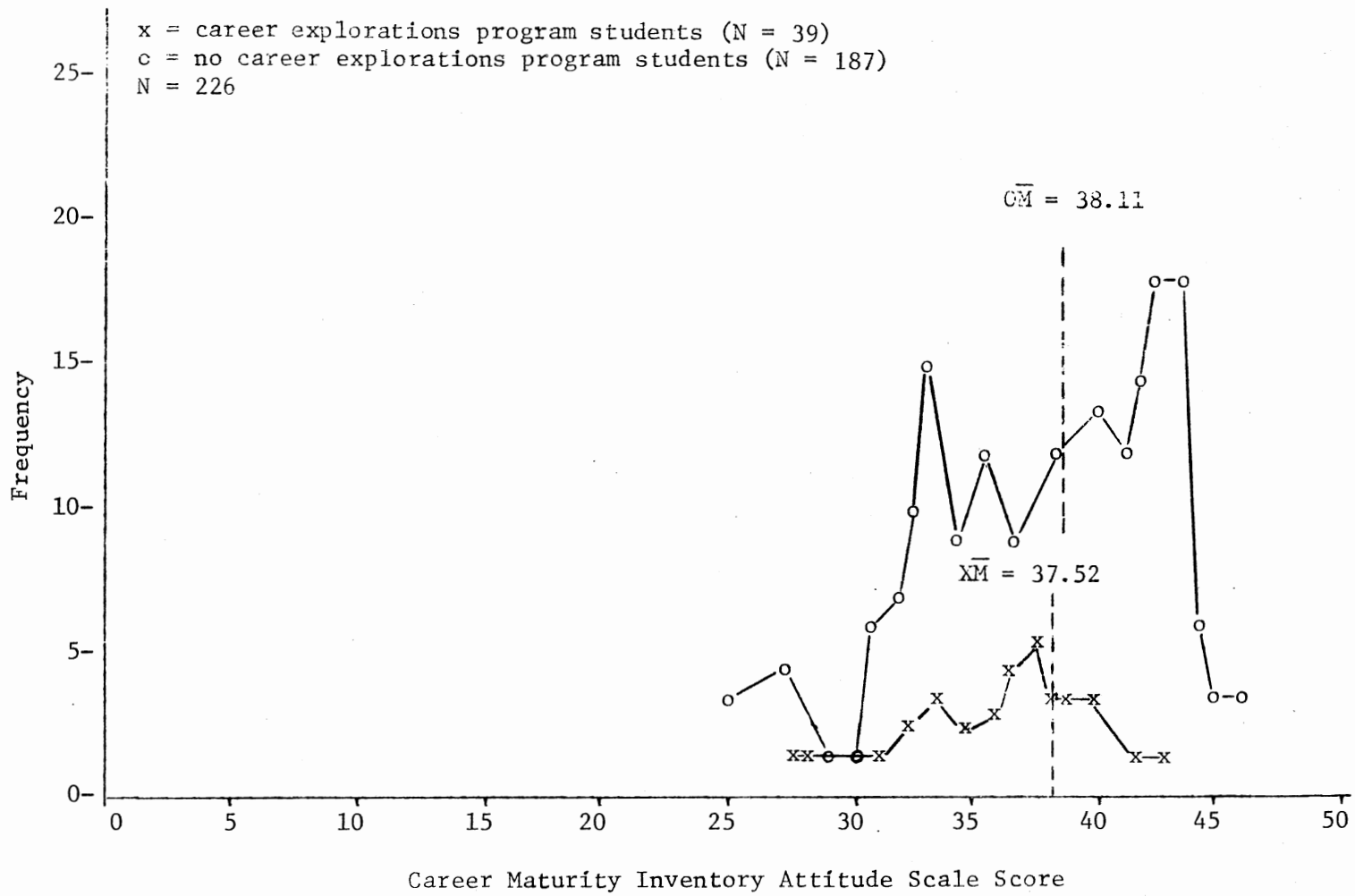


Figure 4: Histogram CMI Scores, 12th Grade

of having made tentative occupational choices.

- (2) There is no statistically significant correlation between the career program experience and career maturity of students.

Using the Statistical Analysis System (SAS), Barr and Goodnight (3), two-by-two chi square contingency tables were generated for the 11th and 12th grades using the variables career explorations and occupational choice.

For the 11th grade sample, the chi square total was 0.09639 with one degree of freedom, and a probability of 0.7509 that a total chi square value of this magnitude could be obtained by chance. (See Table IV.)

TABLE IV  
TWO-BY-TWO CONTINGENCY TABLE, JUNIORS

Tentative Occupational Choice		Career Explorations		Totals
		Yes	No	
No	observed	16.00	81.00	97.00
	expected	15.13	81.87	97.00
	$x^2$ cell value	0.05	0.01	0.06
Yes	observed	23.00	130.00	153.00
	expected	23.87	129.13	153.00
	$x^2$ cell value	0.03	0.01	0.04
Totals	observed	39.00	211.00	250.00
	expected	39.00	211.00	250.00
	$x^2$ value	0.08	0.02	0.10

Total chi square = 0.09639 with 1 degree of freedom  
Probability > chi square = 0.7509

The 12th grade chi square totaled 1.37754, with one degree of freedom, and a 0.2387 probability that this magnitude could be obtained by chance. (See Table V.)

TABLE V  
TWO-BY-TWO CONTINGENCY TABLE, SENIORS

Tentative Occupational Choice	Career Explorations			Totals
	Yes	No		
No	observed	16.00	47.00	63.00
	expected	12.83	50.17	63.00
	x <sup>2</sup> cell value	0.78	0.20	0.98
Yes	observed	29.00	129.00	158.00
	expected	32.17	125.83	158.00
	x <sup>2</sup> cell value	0.31	0.08	0.39
Totals	observed	45.00	176.00	221.00
	expected	45.00	176.00	221.00
	x <sup>2</sup> value	1.10	0.28	1.38

Total chi square = 1.37754 with 1 degree of freedom  
Probability > chi square = 0.2387

In both instances, 11th and 12th grade samples, the 0.05 alpha level was not achieved, therefore, the first hypothesis failed rejection.

For testing the second hypothesis, a hierarchical multiple correlation was chosen from SAS (3). This statistical tool not only provided an F value for each of the six variables (socioeconomic status of parents, sex, grade in school, occupational choice, selection of the career explorations program, and the experience of the career explorations

program), but partialled out the commonalities between variables and isolated the variables' unique contributions to the total regression formula and reported the results in an analysis of variance format.

Dummy variables were also utilized to analyze the contributory effects of the classification variables (sex, parents' socioeconomic status, grade in school, tentative occupational choice, elect/not elect ninth grade career explorations program, and career exploration/no career explorations experience) necessitated by the nature of the multiple regression analysis of covariance statistical model used in SAS (3, pp. 118-119).

The independent variable under hypothetical investigation, career explorations program experience, contributed to the forced regression model sequential sum of squares 26.6170 with an F value of 1.2289. (See Table VI for complete report of all variables.) The probability that an equal or greater F value could be obtained by chance was 0.2683. Once again, the second hypothesis failed rejection at the 0.05 alpha level.

Upon analyzing the data generated by the multiple regression program, two independent variables were found to correlate with the criterion variable career maturity when the variables' shared contributions were statistically partialled out.

As could be expected, "grade in school" correlated positively with career maturity. The probability that a greater F value could be obtained by chance was 0.0277. The unique contribution of the variable "tentative occupational choice" was statistically significant at the 0.0001 level of rejection and was positively correlated with increased career maturity as measured by the Career Maturity Inventory Attitude Scale.



TABLE VI  
 MULTIPLE CORRELATION ANALYSIS: CRITERION  
 VARIABLE, CAREER MATURITY VARIABLE

Independent Variables	DF	SS <sup>2</sup>	F Value Total	Prob > F	SS <sup>2</sup>	F Value Partial	Prob > F
1. Socioeconomic Status (parents)	5	345.63721	3.19158	0.0080	231.76344	2.14008	0.0594
2. Sex	1	15.80628	0.72977	0.3925	17.53030	0.80937	0.3689
3. Grade in School	2	599.09311	13.82992	0.0001	155.55855	3.59103	0.0277
4. Tentative Occupational Choice/No Choice	1	736.37454	34.92144	0.0001	732.74152	33.83031	0.0001
5. Elect/Not Elect Ninth Grade Career Explorations	1	37.98187	1.75360	0.1862	43.82551	2.02340	0.1557
6. Career Explorations/ No Career Explorations	1	26.61704	1.22890	0.2688	26.61704	1.22890	0.2683

It should be noted also that a third independent variable, socioeconomic status of parents, approached significance of unique contributory effects; however, the unique contribution attributed to this variable failed rejection at the 0.05 alpha level.

## CHAPTER V

### SUMMARY, RESULTS AND CONCLUSIONS

#### Summary

##### Hypotheses

This study examined, basically, two hypotheses:

- (1) There is no statistically significant difference between the career explorations group and their peers in the indication of having made tentative occupational choices.
- (2) There is no statistically significant correlation between the career explorations program experience and career maturity of students.

In the following pages, the study is summarized and the hypotheses are considered as to the relationship of the results received and a number of conclusions about them are stated. In addition, several recommendations which were reached through a logical analysis of these results are suggested.

##### Sample

The sample consisted of 509 students enrolled in the Bartlesville Public School System (30 eighth grade students from Central Junior High School and 253 juniors and 226 seniors from College High School). The respondent juniors and seniors comprised a 70.13 percent sample of the population of 683 for the two grades.

The eighth grade respondents were chosen by comparing students' numbers to a table of random numbers. A total of 15 from the two groups (those who had enrolled in the ninth grade career explorations program and those who had not enrolled for the career explorations program) were selected in this manner and comprised the respondent sample.

### Instrumentation

The instrument chosen to analyze the effects of the career explorations program on the career maturity of the students who had successfully completed the program was Crites' (8) Career Maturity Inventory Attitude Scale. It was chosen for several reasons: (1) its length was practical for administration in one class period length of time; (2) it was standardized, thus making data available on its validity and reliability; and (3) it had been used in a number of intervention strategy studies.

Additional demographic and tentative occupational choice information was gathered through the use of a self-developed instrument. (See Appendix B.)

### Methodology

As in most studies, several statistical tests were available with which to test the hypotheses. In this study the most rigorous techniques were utilized that could be defended on the basis of meeting statistical assumptions. Chi square was chosen over the  $\bar{z}$  and the tetrachoric  $r$  to test hypothesis No. 1, as it satisfied cell requirements without a correctional formula (such as Yates Correction for small cell frequencies) and the variable of careers/no careers (when adjusted to successful

completion of the program) and occupational choice/no choice represented true dichotomy situations.

For the second hypothesis analysis of variance and separate t tests were briefly considered. AOV was eliminated as an overlap of variables; i.e., selection of the career explorations program and career explorations program experience had necessitated a relational hypothesis rather than a differential one. Separate t tests would negate comparisomal analysis which was the heart of the stated problem, therefore, it was also eliminated.

The statistical test chosen was a hierarchical multiple regression that enabled the results to be presented in an analysis of variance format. The multiple regression technique also partialled out effects shared with other independent variables and provided each variable's unique contributions to the criterion variable (career maturity).

### Results

A two-by-two chi square was employed to test the first hypothesis (There is no statistically significant difference between the career explorations group and their peers in the indication of having made tentative occupational choices) and the results indicated that the hypothesis could not be rejected. (Eleventh grade; Chi square = 1.37754 and probability  $> F = 0.7509$ . Twelfth grade: Chi square = 1.37754 and probability  $> F = 0.2387$ .) In effect, the juniors and seniors who had taken the career explorations course in the ninth grade had not made tentative occupational choices any sooner than the control group, their peers (those who had not taken the ninth grade career exploration program).

Similarly, the second hypothesis (There is no statistically significant correlation between the career explorations program experience and the career maturity of students) when the data was subjected to a hierarchical multiple regression analysis, could not be rejected at the 0.05 level (partial F value = 1.22890 and probability  $> F = 0.2683$ ). There appeared to be no statistically significant relationship between the career explorations treatment and career maturity as measured by Crites' (8) Career Maturity Inventory Attitude Scale.

#### Conclusions

After a thorough analysis of the data, the only conclusions directly relevant to the hypotheses were that there appeared to be no statistically significant effects on either the occupational choices or the career maturity of students who had the career explorations experience. While the mean of the Career Maturity Inventory Attitude scores for the career explorations groups (8th, 11th, and 12th grades), when compared to the control groups' means, appeared to move from a five + raw point difference to within a one point difference at the 12th grade, this movement could have been easily achieved by the laws of probability and chance and was not statistically attributable to the career explorations program intervention strategy.

One factor that may have had contributory effects on the failure to reject the second hypothesis may have been the small sample of eighth grade respondents.

Similar studies reported in the literature vary greatly in results, as was expected by the very nature of the problem; i.e., researching the effects of divergent intervention strategies upon career maturity.

As the length, duration and methods of the intervention strategies varied, so, too, do the results obtained.

The literature enforced this expectation. Several studies showed no statistical significance, Shirts (23) and Schmieding (22); while others, Goodson (13), Asbury (1), Bovee (5) and Gilliland (11), revealed a statistical difference between groups and a positive contribution on the dependent variable of career maturity by the intervening strategies.

An interesting aspect of the study was produced as a by-product of the multiple regression analysis of independent variables' contributions to the criterion variable, career maturity. The independent variable, occupational choice, correlated positively with career maturity at the 0.0001 level. (See Table VI.) This extremely close relationship of occupational choice and career maturity seems to support the works of both Super (28) and Tiedeman, et al. (31)

Super (28) postulated that one of the components of vocational maturity is choice, while Tiedeman (31) seems to make an even stronger case for this relationship as he states that vocational development (career maturity) was: "The aspects of the continuous unbroken flow of a person's experiences that are of relevance to his fashioning a work identity (occupational choice)" (p. 2).

#### Recommendations

The extreme difficulty encountered in incorporating the small number of eighth grade students and the resulting analysis of data suggested that an entirely different approach should be used in future studies of this nature. If an ex post-facto approach must be employed, it would be advisable to use a larger sampling of the

population of the benchmark eighth grade students. If at all possible, however, it would be more advisable to eliminate some of the assumptions necessary to the design of this study by use of the experimental design utilizing a pre-test and post-test format with experimental and control group respondents.

Further study should be attempted in the area of tentative occupational choice to determine its precise relationship to career maturity. It would appear that career maturity may be causal in nature to tentative occupational choice, but could we not affect career maturity through an intervention strategy aimed at decision-making (when used in conjunction with a career explorations program)? Decision-making may also be highly related to the criterion variable, career maturity, and a study could be generated to test this possibility.

To the Bartlesville School System, the recommendation would be to examine closely the terminal goals and objectives of the ninth grade career explorations program and the methods of instruction used to reach these objectives. If at all possible, it would be beneficial to begin administering the Career Maturity Inventory Attitude Scale as a pre-test and post-test instrument for the program. In this manner, the value added, if any, by the career explorations program could be more precisely assessed when compared to a control group's performance. Also, it would be advisable to consider obtaining the Competence Test portion of the Crites' (8) Career Maturity Inventory and assess the effects of the career explorations program on the basis of competencies gained as well as attitudinal changes.

While this study dealt primarily with an evaluation of the effects of the career explorations program on the students' career maturity, its



results do not purport to evaluate all of the goals and objectives of the career explorations program. While it can not be said that the career explorations students showed statistically significant gains in the area of career maturity, there may have been gains and resulting benefits untested by this study.

#### Discussion of the Results

After considering carefully both the results and the methodologies and instructional strategies used in the career explorations program as conducted at Bartlesville Central Junior High School, several reasons for a lack of measurable effects appeared as possibilities.

The first alternative is that the ameliorating effects of the small "benchmark" sample from the pre-career explorations program population, in truth, masked the dissimilarities of the two groups. In other words, the small pre-career explorations program group could conceivably be proved statistically different from the general population if a proportionately larger sampling of their peers had been obtained.

Beyond this possibility, however, this writer believed that there could have been a more basic deficiency in the curriculum of the career explorations program. By examining the curriculum carefully, it was discovered that a logic step appeared to have been omitted. While the career explorations program appeared to cover career awareness, exploration of alternative occupations, exploration of "self," and laboratory simulated experiences in the world of work, there appeared to be no reinforcement or concentration on sharpening decision-making skills. In effect, the career explorations program seemed to provide information on self-evaluation of aptitude and attitudes, occupational information to

be matched to these capabilities and characteristics, and the motivation to reach a decision, but omitted the important development process of mature decision-making.

Of course, this may have been unnecessary for some students, as can be expected in the general population. However, it seems logical that there could not have been statistically measurable effects produced if these participants were not generally trained or taught the basic skills of decision-making before being prompted or motivated to make an occupational choice.

As this study dealt with only one of the terminal objectives of the career explorations program, it could not be stated that there were no positive effects produced by the program. However, if there were positive effects, they were beyond the limited scope of this study.

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APPENDIX A  
CORRESPONDENCE

123 W. Hartman  
Stillwater  
Oklahoma 74074

January 12, 1976

Dr. John O. Crites  
Department of Psychology  
University of Maryland  
College Park  
Maryland 20742

Dear Dr. Crites:

While reviewing the literature in preparation of researching the effects of a career explorations intervention strategy, I found reference to your Vocational Development Inventory. This letter is written in the hopes that I may obtain your permission to use the VDI as the basic instrument central to my study.

If you grant this permission, I would be happy to furnish you with a copy of my dissertation so that you may incorporate its results in the continuing effort to investigate the phenomenon of vocational development.

Thank you for your time and attention in this matter.

Sincerely,

James A. Lane

## (UNIVERSITY OF MARYLAND LETTERHEAD)

January, 1973

Mr. James A. Lane  
123 W. Hartman  
Stillwater, Oklahoma 74074

Dear Mr. Lane:

Thank you for your inquiry about the Vocational Development Inventory. Its name has now been changed to the Career Maturity Inventory (CMI), and it will be published by CTB/McGraw-Hill (Monterey, California 93940) in early 1973. For further information concerning CMI test materials, which now include the Competence Test as well as the Attitude Scale, please contact Dr. Frank Snyder at CTB/McGraw-Hill (phone: (408) 373-2932).

Continuing research on the CMI will be published in special research reports and in the professional literature. Reprints will be available upon request from CTB/McGraw-Hill.

Sincerely yours,

John O. Crites, Ph.D.  
Professor

JOC/js



The following is a summary of a personal meeting with Dr. Wayne C. Richardson, Superintendent of Schools, Independent School District #30, Bartlesville, Oklahoma 74003.

The meeting was held February 25, 1977 in Dr. Richardson's office.

1. Requested and received permission to conduct study.
2. Agreed on the use of home room time to administer the instrument, on the condition that it would involve no more than one class period interruption of student time.
3. Dr. Richardson asked that the proposal should be discussed with Dr. Jim Pannell, College High School Principal, as to the details of time and appropriate dates. (This meeting with Dr. Pannell was accomplished later on the same day.)

The following is a summary of the meeting with Dr. Jim Pannell, College High School Principal, Bartlesville, Oklahoma 74003, on February 25, 1977, at College High School.

1. Dr. Pannell accepted the proposal to use his juniors and seniors as respondents for the study.
2. Suggested the month of April and agreed to schedule the specific date to avoid conflict with events that would reduce the sample size.
3. Assigned Mr. Frank Morrison, College High School Vice Principal, to assist in the coordination and facilitation of the data collection efforts.
4. Requested a copy of the finished dissertation.

## (MCGRAW-HILL BOOK COMPANY LETTERHEAD)

March 10, 1976

Mr. James Lane  
123 West Hartman Street  
Stillwater, OK 74074

Dear Mr. Lane:

I enjoyed the chance to chat with you by telephone last week. As promised, I am enclosing a complete set of the Career Maturity Inventory materials as you requested.

We have found this a useful measure in assessing career development and indeed it may be the best available model for career education. We are using it in our summative research for our Careers in Focus junior high school program to test the hypothesis "that career maturity can be markedly accelerated through the intervention of Careers in Focus, with career maturity to be measured using the Career Maturity Inventory." We will be conducting this research using both experimental and control groups in a number of locations.

I hope I will have the opportunity to meet you at the forthcoming National Vocational Education Conference in Stillwater during the week of June 14, 1976. Best wishes.

Sincerely,

Lawrence A. Walsh  
Publisher  
Career Education

LAW/jrt

Enclosures

## (OKLAHOMA STATE UNIVERSITY LETTERHEAD)

March 15, 1976

Ms. June Duran, Assistant Vice-President  
CTB - McGraw-Hill Book Company  
Delmonte Research Park  
Monterey, Ca 93940

Dear Ms. Duran:

I would like to request your permission to use the Career Maturity Inventory Attitude Scale in a research study for my doctoral dissertation.

The research study is designed to assess the effectiveness of the intervention strategy of a course in Careers Exploration at the junior high school level on the maturity of vocational attitudes of high school juniors and seniors.

Mr. Lawrence Walsh of the New York offices of McGraw-Hill has been kind enough to provide a sample of the complete inventory, and suggested that I contact you for permission for its use. Mr. Walsh also suggested that your company might provide the 600 Attitude Scales necessary for completion of the study, or grant the right to locally reproduce the necessary quantity.

As the date for data collection, April 20, 1976, is rapidly approaching, your prompt attention and answer would be greatly appreciated.

Thank you in advance.

Sincerely yours,

James A. Lane  
Graduate Assistant

## (MCGRAW-HILL BOOK COMPANY LETTERHEAD)

March 25, 1976

Mr. James A. Lane  
Graduate Assistant  
Oklahoma State University  
School of Occupational and  
Adult Education  
Stillwater, OK 74074

Dear Mr. Lane:

Thank you for your recent letter to Ms. June Duran which has been referred to me for reply. We are pleased and complimented at your choice of the CMI to use in your doctoral study and we hope the study goes well for you.

Only recently, CTB/McGraw-Hill has reviewed its policy of granting research discounts for such projects as yours. The review resulted in the decision to rescind these discounts in the future. Mr. Walsh, although in a different division of McGraw-Hill, is a very good friend of ours and we respect his judgment, especially in matters relating to career education. Consequently, I am forwarding the 600 copies of the CMI that you need free of charge. I hope that you will be able to forward to us a copy of the results of the study when it is completed.

Sincerely,

Robert A. Long  
Director  
Product Management

cc: R. Bowen  
L. Walsh

## (OKLAHOMA STATE UNIVERSITY LETTERHEAD)

April 12, 1976

Dr. Robert A. Long, Director  
Product Management  
CTB/McGraw-Hill  
Del Monte Research  
Monterey, CA 93940

Dear Dr. Long:

Your CMI attitude scales arrived April 9, 1976. Please accept my sincerest thank you to all of the fine people at CTB-McGraw-Hill. Your company's spirit of cooperation and dedication to education research has won a life-long friend in me.

Sometime in early summer 1977 I will send you a copy of the dissertation.

Thanks and thank you again.

Sincerely yours,

J. A. Lane  
Graduate Assistant

JAL:cm  
cc: June Duran

## (OKLAHOMA STATE UNIVERSITY LETTERHEAD)

April 12, 1976

Dr. Jim Pannell, Principal  
College High School  
Bartlesville, Oklahoma 74003

Dear Dr. Pannell:

This serves as a coordinating link concerning the research study that we agreed on conducting in the Junior and Senior class home rooms on April 27, 1976.

I will arrive in Bartlesville around 10 A.M. April 26th and can schedule a before or after school meeting with the teachers involved for the purpose of distributing the instruments and discussing the methods of conducting the study.

I certainly hope this meets with your approval. If there needs to be any basic revision of this tentative schedule, please let me know soon. My phone number at the university is (405) 372-6211, Ext. 6289. Thanks for your cooperation.

Sincerely yours,

Jim A. Lane  
Graduate Assistant

JAL:cm

cc: Dr. Wayne Richardson

BULLETIN No. 33  
 April 26, 1976

FACULTY NOTES

1. We will be cooperating with an OSU research study during 2nd hour on Tuesday, April 27. The teachers listed below need to meet with Mr. Jim Lane from OSU on Monday, April 26, at 3:10 p.m. in Room 204. A makeup meeting will be held on Tuesday, at 8:00 a.m. in the Conference Room.

Baird	Heil	Smith, S.
Ballard	Horsman	Snider
Barnes	Love, G.	Steele
Barton	Love, J.	VanSant
Conn	McKinney	West
Dean	Mallams	Wilson, C.
Fairchild	Patterson	Wilson, J.
Gay	Pattison	Wise
Griffin	Quinton	Wooton

2. Bus supervision this week: Mrs. Hicks and Mrs. Higginbotham.



APPENDIX B

INSTRUMENTS

SELF-DESIGNED, DEMOGRAPHIC  
AND CAREER CHOICE DATA

NAME \_\_\_\_\_ GRADE \_\_\_\_\_ SEX \_\_\_\_\_

BOOKLET NUMBER \_\_\_\_\_

Please check the following statements carefully and answer all items. Check (✓) the items and/or answers that apply to you.

1. I have chosen a tentative career field to work in after my formal school ends. \_\_\_\_\_ T \_\_\_\_\_ F
2. Who provides the major source of your family income (specify relationship)? \_\_\_\_\_
3. Please list the occupation of the persons providing the major source of family income. (Do not use the name of the company, but rather the type of job, such as: salesman, secretary, engineer, plumber, etc.)  
\_\_\_\_\_
4. Did you take a junior high course called Career Explorations?  

___ No	___ Yes, 8th grade, Central Jr. High
___ Yes, 9th grade, Central Jr. High	___ Other
5. After high school I plan to:
  - \_\_\_ A. Go on to college.
  - \_\_\_ B. Go on to a vocational school.
  - \_\_\_ C. Go to work.
  - \_\_\_ D. Do not plan to work outside the home.
  - \_\_\_ E. Join armed forces.
  - \_\_\_ F. Have no plans.

## CAREER MATURITY INVENTORY ATTITUDE SCALE

Due to the publisher's restrictions placed on the Career Maturity Inventory Attitude Scale, it can not be reproduced for inclusion herein.

If more information is necessary, write:

C.T.B./McGraw-Hill

Del Monte Research Park

Monterey, California 93940

or, if available through the library or testing departments on campus, an excellent summary of the Career Maturity Inventory Attitude and Competency Sales is contained in the publication:

Crites, John O. Theory and Research Handbook: CMI.  
Monterey, California: CTB/McGraw-Hill, 1973.

APPENDIX C

DOCUMENTS UTILIZED

LIST OF STUDENTS (TAKEN FROM CLASS ROLL  
BOOKS) WHO HAD SUCCESSFULLY COMPLETED  
THE NINTH GRADE CAREER  
EXPLORATIONS PROGRAM

This list was used to verify that the respondents who had indicated having taken the ninth grade career explorations program had, in fact, successfully completed it.

Paul Nissen - Joe Pierce - Kevin Price - Randy Seward - Rick Smith - Steve Snyder - Terry Taylor - Daniel Towers - Bill Trepka - Chuck Trotter - Neal Turinetti - Tom Viles - Arnold Watts - John Welch - Ryan Webster - Bryon Wesson

Marianna Bressett - Marc Gruenwald - Jimmie Hoppock - Syrita Martin  
Sandy Blunk - Jeff Chavez - James Cole - Stephen Delaloye - Kathy Goree - Laura Hines - Steve Ishem - Larry Jones - Susan Kinnard - Stephanie Kean - David Kimball - Mike Lacy - Susan Larison - Weldon Malcolm - Neil Manes - Gene Medlin - Cathy McDonald - Liz Moles - Roger Morris - Kelly Nissen - Isaac Smith - Ward Smith - Darrel Thurman - Cathy Wilson

Roxane Cleaver - Richard Davis - Jeff Ericson - Mark Ferguson - Kyle Gray - Rhonda Ishem - Kay Kahra - Carolyn Landrum - Jerry Manes - Peggy Miller - Roger Owens - Debbie Pendergraft - Brenda Reeder - Bessie Rice - Greg Ridenour - Brent Taylor - Howard Thill - Lynn Thornberry - Charles Vettters

Sherry Beard - Roger Beaumont - Tommy Bell - Barbara Bost - Denise Casey - Alan Coonfield - Ronnie Harris - Ronny Hatheway - Barbara Kuykendall - Bill Lineham - Mike McGraw - Jeff Mott - Pat Ramsey - Charles Sayles - Jim Staler - Phil Tarbox - Chris Wilson - Mya Hopper

Vickie Boone - Danny Brumley - Diana Doggett - Stan Hankins - Tom Harrison - Billy Hawk - Richard Jackson - Edward Johnson - Lori Lagal - Ronny Lloyd - Brenda Masler - Chuck Maze - Jill Prator - Larry Richard - Christina Rumble - Susan Ryan - Tommy Williams - Joy Wisinger

Gary Bell - Richard Benson - Tracy Benway - Wendell Bruner - Pat Cramer - Steve Diller - Carl Fitz - Clyde Fugate - Brent Garrett - George Scott

Bonnie Green - Wayne Harbour - Randy Hastings - Curtis Hannah - Tom Hawkins - Bruce Hildabrand - Terry Hinman - Ray Hoppock - Gary Huddleston - Ken Johnson - John Jones - Bryan Lowry - Jan Mosley - Richard Morrow

OCCUPATIONS ILLUSTRATING VARIOUS SCORES  
ON THE INDEX OF OCCUPATIONAL STATUS

<u>Score</u>	<u>Occupation</u>
Category 1	
90 to 96	Architects (7); dentists (18); chemical engineers (9); lawyers and judges (45); physicians and surgeons (47)
85 to 89	Aeronautical engineers (11); industrial engineers (21); salaried managers, banking and finance (30); self-employed proprietors, banking and finance (5)
80 to 84	College presidents, professors and instructors (31); editors and reporters (14); electrical engineers (40); pharmacists (19); officials, federal public administration and postal service (13); salaried managers, business services (11)
Category 2	
75 to 79	Accountants and auditors (87); chemists (17); veterinarians (3); salaried managers, manufacturing (133); self-employed proprietors, insurance and real estate (9)
70 to 74	Designers (12); teachers (105); store buyers and department heads (40); credit men (8); salaried managers, wholesale trade (41); self-employed proprietors, motor vehicles and accessories retailing (12); stock and bond salesmen (6)
65 to 69	Artists and art teachers (15); draftsmen (45); salaried managers, motor vehicles and accessories retailing (18); self-employed proprietors, apparel and accessories retail stores (8); agents, n.e.c. (29); advertising agents and salesmen (7); salesmen, manufacturing (93); foremen, transportation equipment manufacturing (18)
Category 3	
60 to 64	Librarians (3); sports instructors and officials (12); postmasters (5); salaried managers, construction (31); self-employed proprietors, manufacturing (35); stenographers, typists, and secretaries (18); ticket, station and express agents (12); real estate agents and brokers (33); salesmen, wholesale trade (106); foremen, machinery manufacturing (28); photoengravers and lithographers (5)

- 55 to 59 Funeral directors and embalmers (8); railroad conductors (10); self-employed proprietors, wholesale trade (28); electrotypers and stereotypers (2); foremen communications, utilities, and sanitary services (12)
- 50 to 54 Clergymen (43); musicians and music teachers (19); officials and administrators, local public administration (15); salaried managers, food and dairy products stores (21); self-employed proprietors, construction (50); bookkeepers (33); mail carriers (43); foremen, metal industries (28); toolmakers, and die-makers and setters (41)
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#### Category 4

- 45 to 49 Surveyors (10); salaried managers, automobile repair services and garages (4); office machine operators (18); line-men and servicemen, telephone, telegraph and power (60); locomotive firemen (9); airplane mechanics and repairmen (26); stationary engineers (60)
- 40 to 44 Self-employed proprietors, transportation (8); self-employed proprietors, personal services (19); cashiers (23); clerical and kindred workers, n.e.c. (269); electricians (77); construction foremen (22); motion picture projectionists (4); photographic process workers (5); railroad switchmen (13); policemen and detectives, government (51)
- 35 to 39 Salaried and self-employed managers and proprietors, eating and drinking places (43); salesmen and sales clerks, retail trade (274); bookbinders (3); radio and television repairmen (23); firemen, fire protection (30); policemen and detectives, private (3)
- 

#### Category 5

- 30 to 34 Building managers and superintendents (7); self-employed proprietors, gasoline service stations (32); boilermakers (6); machinists (111); millwrights (15); plumbers and pipe fitters (72); structural metal workers (14); tinsmiths, coppersmiths, and sheet metal workers (31); deliverymen and routemen (93); operatives, printing, publishing and allied industries (13); sheriffs and bailiffs (5)
- 25 to 29 Messengers and office boys (11); newsboys (41); brick masons, stonemasons, and tile setters (45); mechanics and repairmen, n.e.c. (266); plasterers (12); operatives, drugs and medicine manufacturing (2); ushers, recreation and amusement (2); laborers, petroleum refining (3)
- 20 to 24 Telegraph messengers (1); shipping and receiving clerks (59); bakers (21); cabinetmakers (15); excavating, grading, and road machine operators (49); railroad and car shop

mechanics and repairmen (9); tailors (7); upholsterers (12); bus drivers (36); and filers, grinders, and polishers metal (33)

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#### Category 6

- 15 to 19      Blacksmith (5); carpenters (202); automobile mechanics and repairmen (153); painters (118); attendants, auto service and parking (81); laundry and dry cleaning operatives (25); truck and tractor drivers (362); stationary firemen (20); operatives, metal industries (103); operatives, wholesale and retail trade (35); barbers (38); bartenders (36); cooks, except private household (47)
- 10 to 14      Farmers (owners and tenants) (521); shoemakers and repairers, except factory (8); dyers (4); taxicab drivers and chauffeurs (36); attendants, hospital and other institution (24); elevator operators (11); fishermen and oystermen (9); gardeners, except farm and groundskeepers (46); longshoremen and stevedores (13); laborers, machinery manufacturing (10)
- 5 to 0        Hucksters and peddlers (5); sawyers (20); weavers, textile (8); operatives, footwear, except rubber, manufacturing (16); janitors and sextons (118); farm laborers, wage workers (241); laborers, blast furnaces, steel works, and rolling mills (26); construction laborers (163)
- 0 to 4        Coal mine operatives and laborers (31), operatives, yarn, thread and fabric mills (30); porters (33); laborers, saw mills, planing mills, and millwork (21)

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(Frequency per 10,000 males in 1960 experienced civilian labor force in parentheses)

SOURCE: Duncan (9, pp. 122-123).



VITA<sup>2</sup>

James A. Lane

Candidate for the Degree of

Doctor of Education

Thesis: THE EFFECTS OF A CAREER EXPLORATIONS PROGRAM ON CAREER MATURITY

Major Field: Vocational-Technical and Career Education

Biographical:

Personal Data: Born in Omaha, Nebraska, March 18, 1939, the son of James A. and Dorothy D. Lane.

Education: Graduated from Omaha South High School, Omaha, Nebraska, in May, 1957; received a Bachelor of General Education degree in Business Administration from the University of Nebraska at Omaha in 1965; received a Master of Arts in Teaching degree with a major in Distributive Education from Oklahoma City University in 1972; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1977.

Professional Experience: Industrial sales experiences, 1965-70; teacher of career explorations at Central Junior High School, Bartlesville, Oklahoma, September, 1972-June, 1974; teacher/coordinator of Distributive Education at Sooner High School, Bartlesville, Oklahoma, September, 1974-June, 1975; graduate assistant, Oklahoma State University, School of Occupational and Adult Education, 1976-1977.

Professional Organizations: Member of American Vocational Association, National Association of Distributive Education Teachers, Phi Delta Kappa, Iota Lambda Sigma, Oklahoma Vocational Association, Oklahoma Distributive Education Association, Oklahoma Adult and Continuing Education Association, Collegiate VICA and Collegiate DECA, Oklahoma State University chapters.