





This is to certify that the

thesis entitled

A STUDY OF THE RELATIONSHIP BETWEEN STUDENT VOLUNTARY PARTICIPATION IN CAREER CENTERS AND STUDENT CAREER MATURITY

presented by

Daniel Russell Seik

has been accepted towards fulfillment of the requirements for

Doctor of Philosophy degree in Secondary Education and Curriculum

Techun Major professor

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Department of Secondary Essent



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Ву

Daniel R. Seik

A DISSERTATION

Submitted to Michigan State University In partial fulfillment of the requirements for the degree of

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Department of Secondary Education and Curriculum

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The population for the study consisted of tenth, eleventh, and twelfth grade students in five high schools in the State of Michigan that housed a Career Center.

Two instruments administered were the (1) Student Information Questionnaire, and (2) the Attitude Scale and the Competence Test of the Career Maturity Inventory.

ABSTRACT

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The major findings of the study are presented herein:

- 1. The mean CMI scores of the non-participant group was signifthe bud icantly lower than the combined mean CMI scores of the low and high participant groups.
- 2. The mean CMI scores of students enrolled in a college preparatory program were significantly higher than the mean CMI scores of students enrolled in a general program. However, while the students enrolled in a vocational program scored significantly higher on the Competence Test than students enrolled in a general program, there was no significant difference between the scores of these two groups on the Attitude Scale.
 - While females scored significantly higher on the Competence Test, there was no significant difference in the scores of these two groups on the Attitude Scale.
 - 4. While eleventh grade students scored significantly higher on the Competence Test than tenth grade students, there was no significant difference between the mean scores of these two groups on the Attitude Scale. There was no significant difference between the mean CMI scores of eleventh and twelfth

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 - 4. While eleventh grade students scored significantly higher on the Competence Test than tenth grade students, there was no significant difference between the mean scores of these two groups on the Attitude Scale. There was no significant aitference between the mean CMI scores of eleventh and twelfth

grade students on both the Attitude Scale and Competence Test of the CMI.

The results of this study suggest that: (1) there is a need for a program of intervention to identify and assist students in their career development, (2) Career Centers should provide students with a wide variety of exploration experiences that encourage the practical application of their career planning skills, (3) a budget should be established for the operation and improvement of the Career Center. The budget should include specific allocations for the continual purchase of current career-related materials and paraprofessional staffing, and (4) the need for Career Centers is apparent if schools are to provide students with career development activities to enhance their career development.

The major recommendations advanced related to ideas for further research. It is concluded that:

- Studies should be undertaken to determine the effectiveness of various programs of study (college preparatory, vocational, general, etc.) on student career maturity. Students should be assessed both prior to and at the conclusion of the program.
- Research should be conducted on the effects of specific career development activities on the career maturity of students.
- Research is needed on the effects of various Career Center staffing patterns, services offered, career information systems and funding methods on student career maturity.

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The author wishes to acknowledge the cooperation and assistance of all who made this study possible. His sincere thanks goes to the five Career Center Directors, Principals, and Guidance Counselors who cooperated with the researcher in conducting this study.

A special thanks to my wife, Cindy, for her inspiration and support throughout this endeavor.

iii

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TABLE	OF	CONTENTS	

								Page
LIST OF	TABLES							vi
Chapter								
Ι.	INTRODUCTION	an .						1
	Statement of the Problem							92
	Purpose of the Study				:	:	:	4
	Significance of the Study	: : :	:	: :	:	:	•	4 5
	Limitations and Delimitations					•		6
	Delimitations		:	: :	:	:	:	07
	Definition of Terms		•	• •	•	•	•	8
8,			•	• •	•	•	•	102
п.	REVIEW OF LITERATURE		•	• •	•	•	•	10
	Background of Career Education		•		•	•	•	10
	Trait-Factor	:::	:	: :	:	:	:	21
	Decision-Making	• • •	•	• •	•	•	•	22
	Developmental							26
	Concept of Vocational Maturity Background	: : :	:		:	:	:	36
	Related Research		•	• •	•	•	•	38
	Need for Career Centers		:		:	:		43
	Emergence of the Career Center C	oncept	:	:	:	•	:	4/
								54
III.	DESIGN OF THE STUDY		•		•	•	•	54
	Introduction	· · ·	•	• •	•	•	•	54 54
	Instrumentation				•	•		55
	Data Collection	:::	:	:	:	:	:	59

nordely askeland	

Chapter

IV. ANALYSIS OF DATA Introduction Presentation of Data Summary V. SUMMARY AND CONCLUSIONS Summary of the Study Discussion of the Findings Question 1Level of Participation Question 2Program of Studies Question 3Sex Question 4Grade Level Suggestions for the Operation of Career Centers Recommendations for Further Research Appendix A. PARTICIPATING SCHOOLS B. INVITATION LETTER D. CAREER CENTER QUESTIONNAIRE E. STUDENT INFORMATION QUESTIONNAIRE F. LIST OF CAREER CENTER DIRECTORS SIBLIOGRAPHY			
Introduction Presentation of Data Summary V. SUMMARY AND CONCLUSIONS Discussion of the Findings Discussion of the Findings Ouestion 1Level of Participation Question 1Level of Participation Question 2Program of Studies Question 3Sex Question 3Sex Question 5-of the Operation of Career Centers Recommendations for Further Research Appendix A. A. PARTICIPATING SCHOOLS I B. INVITATION LETTER I C. FOLLOW-UP INVITATION LETTER I D. CAREER CENTER QUESTIONNAIRE I E. STUDENT INFORMATION QUESTIONNAIRE I F. LIST OF CAREER CENTER DIRECTORS I SUBLIOGRAPHY . .	IV.	ANALYSIS OF DATA	. 61
V. SUMMARY AND CONCLUSIONS Summary of the Study Discussion of the Findings Question 1Level of Participation Question 1Level of Participation Question 2Program of Studies Question 3Sex Question 5 for fue Operation of Career Centers Recommendations for Further Research Appendix A. PARTICIPATING SCHOOLS B. INVITATION LETTER C. FOLLOW-UP INVITATION LETTER D. CAREER CENTER QUESTIONNAIRE E. STUDENT INFORMATION QUESTIONNAIRE F. LIST OF CAREER CENTER DIRECTORS SIBLIOGRAPHY		Introduction	61 73 86
Summary of the Study	۷.	SUMMARY AND CONCLUSIONS	. 88
Question 3Sex Questions for the Operation of Career Centers Suggestions for the Operation of Career Centers Recommendations for Further Research Appendix A. PARTICIPATING SCHOOLS B. INVITATION LETTER C. FOLLOW-UP INVITATION LETTER D. CAREER CENTER QUESTIONNAIRE E. STUDENT INFORMATION QUESTIONNAIRE F. LIST OF CAREER CENTER DIRECTORS SIBLIOGRAPHY		Summary of the Study . Discussion of the Findings . Question 1Level of Participation Question 2Program of Studies	. 88 91 91 92
Suggestions for the Operation of Career Centers Recommendations for Further Research Appendix A. PARTICIPATING SCHOOLS B. INVITATION LETTER C. FOLLOW-UP INVITATION LETTER D. CAREER CENTER QUESTIONNAIRE E. STUDENT INFORMATION QUESTIONNAIRE F. LIST OF CAREER CENTER DIRECTORS SIBLIOGRAPHY		Question 3Sex	. 94
Recommendations for Further Research		Suggestions for the Operation of Career Centers	95
Appendix A. PARTICIPATING SCHOOLS B. INVITATION LETTER C. FOLLOW-UP INVITATION LETTER D. CAREER CENTER QUESTIONNAIRE E. STUDENT INFORMATION QUESTIONNAIRE F. LIST OF CAREER CENTER DIRECTORS SIBLIOGRAPHY		Recommendations for Further Research	. 99
A. PARTICIPATING SCHOOLS 1 B. INVITATION LETTER 1 C. FOLLOW-UP INVITATION LETTER 1 D. CAREER CENTER QUESTIONNAIRE 1 E. STUDENT INFORMATION QUESTIONNAIRE 1 F. LIST OF CAREER CENTER DIRECTORS 1 SIBLIOGRAPHY 1	Appendi	x the Assistance Given to the Careno sector Staff , a	
B. INVITATION LETTER I C. FOLLOW-UP INVITATION LETTER I D. CAREER CENTER QUESTIONNAIRE I E. STUDENT INFORMATION QUESTIONNAIRE I F. LIST OF CAREER CENTER DIRECTORS I SIBLIOGRAPHY I	Α.	PARTICIPATING SCHOOLS	101
C. FOLLOW-UP INVITATION LETTER	В.	INVITATION LETTER	102
D. CAREER CENTER QUESTIONNAIRE 1 E. STUDENT INFORMATION QUESTIONNAIRE 1 F. LIST OF CAREER CENTER DIRECTORS 1 BIBLIOGRAPHY 1	с.	FOLLOW-UP INVITATION LETTER	103
E. STUDENT INFORMATION QUESTIONNAIRE	D.	CAREER CENTER QUESTIONNAIRE	104
F. LIST OF CAREER CENTER DIRECTORS 1 JIBLIOGRAPHY 1	Ε.	STUDENT INFORMATION QUESTIONNAIRE	117
BIBLIOGRAPHY	F.	LIST OF CAREER CENTER DIRECTORS	121
	BIBLIOG	RAPHY	122

Page

.11 Results of Analysis of Variance for Design

1,12 Results of Analysis of Variance 1de Hypotheses 2a, 2b, 2c, and 2d

Chapter

x	
PARTICIPATING SCHOOLS	
STUDENT INFORMATION QUESTIONNAIRE	

F. LIST OF CAREER CENTER DIRECTORS

Page

LIST OF TABLES

able		Page
4.1	Responses of the Participant Groups on Their Ability to Define Career Plans	62
4.2	Responses of the Participant Groups to the Number of Teachers that Related Subject Matter to Careers	63
4.3	Responses of the Participant Groups to the Number of Courses that Had Career-Related Activities	64
4.4	Responses of Low and High Participant Groups to the Assistance Given by the Career Center Staff	65
4.5	Responses of Low and High Participant Groups to the Helpfulness of the Career Center Staff	66
4.6	Mean Rating of the Responses of the Low and High Participant Groups to the Usefulness of Career Center Materials and Equipment	67
4.7	Mean Ratings of the Participant Groups to the Usefulness of Various Resources in Making a Career Choice	68
4.8	Mean Responses of the Career Centers on the Methods Utilized to Attract Students	71
4.9	Mean Responses of the Career Centers on the Importance of Career Center Functions	72
4.10	Summary of Mean Scores on the Attitude Scale and Competence Test of the Career Maturity Inventory	74
4.11	Results of Analysis of Variance for Testing Hypotheses la and lb	75
4.12	Results of Analysis of Variance for Testing Hypotheses 2a, 2b, 2c, and 2d	77

LIST OF TABLES

	4.1
Responses of the Particlosus Groups to the Number of Courses that Had Carrer-Related Activities	4.3
	4.4
	4.5
Mean Rating of the Responses of the Low and High Partitipant Croups to the Usefulness of Carber Center Materials and Equipment	
Mean Responses of the Career Centers on the Methods Utilized to Attract Student≤	
Summary of Mean Scores on the Attitude Scale and Competence Test of the Caroer Maturity Javantary	
Results of Analysis of Variance for Testing Hypotheses 1a and 1b	4.11
Results of Analysis of Variance for Testing Hypotheses 2a, 2b, 2c, and 2d	

Table		Page
4.13	Results of Analysis of Variance for Testing Hypotheses 3a and 3b	
4.14	Results of Analysis of Variance for Testing Hypotheses 4a, 4b, 4c, and 4d	83

1071 Convention of the National Association Principals, Houston, Texas, January 23, 1

	4.1
A Results of Analysis of Variance for Testing	. 4.1

To the parent it offers have of an encational program that will provide their children with a selecte still. Each year nearly 2.5 million students leave their CHAPTER Interation without possessing

INTRODUCTION

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The first attitude we would change, I suggest, is our own. We must purge ourselves of academic snobbery. For education's most serious failing is its self-induced voluntary in action fragmentation, the strong tendency of education's several parts to separate from one another, to divide the enterprise

At present, career education may be all things to all people. To vocational people it may be an opportunity to extend the areas they are concerned about into the academic courses. To the teacher it may be an opportunity to make the curriculum more relevant to the student.

¹Sidney P. Marland, Jr., "Career Education Now," Speech to the 1971 Convention of the National Association of Secondary School Principals, Houston, Texas, January 23, 1971.

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It is now commonly accepted that the educational years K-12 must be geared to the acquisition of general academic skills and broad occupational exploration. This has prompted the implementation of programs such as experiential learning activities, computerized occupational information systems, and greater involvement of the community in the educational process. Corresponding with these curricular innovations is the endeavor to gain a better understanding of the dynamic rationale of career development and career maturity. Of pressing interest to this research is the development of Career Centers in the State of Michigan and their possible impact on career development of the students served by such centers.

In harmony with this effort, the basic foundation of this study was to determine the effectiveness of disseminating career information to students via a career center. In this study Career Centers were viewed as information centers that contained career related materials to assist students in their career development and to aid counselors and other staff members in planning career development activities.

²U.S. Department of Health, Education, and Welfare, Office of Education, <u>Career Education</u> (Washington, D.C.: Government Printing Office, August 1972), p. 1.

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³⁰LS, Department of Health, Education, and vertains united of Education, Carter Education (Mashington, P.C.: Noverment Primiting Office, Nagues 1975), p. 1.

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Statement of the Problem

If Career Centers are to be utilized as an educational tool for facilitating the career development of students, a thorough examination of their functions and relationship to students' career maturity is important.

The development and implementation of Career Centers has been hindered by a lack of understanding of the relationship of Career Center functions to student career maturity. Most of the literature is limited to an explanation of what Career Centers should be and what they should accomplish. Very little information is available on Career Center activities and programs that effectively promote student career development.

The increased development and implementation of Career Centers in several secondary and post-secondary institutions, requires studies that identify the relationships between student career maturity and their level of voluntary participation in career center activities. The problem then, was to identify students who had voluntarily participated in Career Center activities according to their level of involvement (low and high) and to examine their level of career maturity as measured by the Career Maturity Inventory. A group of students who had not voluntarily participated in Career Center activities were also administered the Career Maturity Inventory for descriptive purposes. Additionally, the career maturity data was analyzed according to the student's (1) program of studies, (2) sex, and (3) grade level.

3

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Purpose of the Study

The purpose of this study was to examine the relationship between voluntary participation in career center functions and the career maturity of students as measured by the Career Maturity Inventory (CMI). Specifically, the objectives of this study were:

- To determine if student CMI scores are significantly different based upon non-participation (zero visits), low participation (1-2 visits) and high participation (3 or more visits) in career center activities and programs.
- To determine if significant differences in student CMI scores are related to sex, grade level, and program of studies (academic, vocational, general).

Significance of the Study

On the basis of a review of literature, it was determined that there was a need for research on the level of student participation in Career Center functions. As a result of this investigation, local school administrators, counselors, teachers, career center personnel, along with parents and community members may be able to select and plan for effective student participation in Career Center programs and activities that would most optimally enhance the career development of students. This study would also assist the schools in attaining maximum utilization of their Career Centers' facilities. This study could provide existing Career Centers and Schools that are contemplating the implementation of a Career Center with information that could be of assistance in the development of a comprehensive Career Center Facility.

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Statement of Hypothesis

The major question toward which this investigation was directed was whether there is a significant relationship between student career maturity as measured by the Attitude Scale and Competence Test of the Career Maturity Inventory and the level of voluntary participation in career center activities, and the student's program of studies, sex, and grade levels. The subsidiary questions and related hypotheses are listed below.

- 1. Are there significant differences between the CMI scores of students in non, low, and high participant groups?
 - la. There are no significant differences between the mean CMI scores of non-participating students and the mean CMI scores of low and high participating students.
 - 1b. There is no significant difference between the mean CMI scores of low participating students and the mean CMI scores of high participating students.
- Are there significant differences between the CMI scores of students enrolled in college preparatory, vocational, and general programs?
 - 2a. There is no significant difference between the mean CMI scores of students enrolled in a college preparatory program and students enrolled in a general program.
 - 2b. For each of the three participant groups (non, low, and high), there is no significant difference between the mean CMI scores of students enrolled in a college preparatory program and students enrolled in a general program.
 - 2c. There is no significant difference between the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program.
 - 2d. For each of the three participant groups (non, low, and high), there is no significant difference between

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 - 1c. There is no significant difference between the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program.
 - d. For each of the three participant groups (non, 10%, and high), there is no significant difference between



the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program.

- 3. Are there significant differences between the CMI scores of males and females?
- 3a. There is no significant difference between the mean CMI scores of males and females.
- 3b. For each of the three participant groups (non, low, and high), there is no significant difference between the mean CMI scores of males and females.
- 4. Are there significant differences between the CMI scores of tenth, eleventh, and twelfth grade students?
- 4a. There is no significant difference between the mean CMI scores of tenth grade students and the mean CMI scores of eleventh grade students.
- Recting 4b. For each of the three participant groups (non, low, and high), there is no significant difference between the mean CMI scores of tenth grade students and the mean CMI scores of eleventh grade students.
- 4c. There is no significant difference between the mean CMI scores of eleventh grade students and the mean CMI scores of twelfth grade students.
- 4d. For each of the three participant groups (non, low, and high), there is no significant difference between the mean CMI scores of eleventh grade students and the mean CMI scores of twelfth grade students.

Limitations and Delimitations

The recognized limitations of this study are conceded to be in the confidence that can be placed upon the perceptions and opinions of those students responding to the questionnaire.

Since the topic of career maturity is developmental in nature, students' responses may be suspect in that they may not accurately the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program.

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record an individual's true feelings and thoughts on the topic of career maturity. In addition, the ability of the instrument utilized to measure career maturity may be accurate in measuring the vocational aspects of career maturity but somewhat limited in assessing the other aspects of career maturity. While every effort to control for these possible weaknesses was made, any conclusions drawn from the data are obviously not above question.

Delimitations

This study was limited to five selected school districts that housed Career Centers in Michigan. At the time of the study, the Michigan State Department of Education identified these five Career Centers as having been in operation for at least one year and therefore did not necessarily include all the Career Centers in the State of Michigan. A total of 10 to 15% of the population of students in grades 10, 11, and 12 of each school system was randomly selected.

Although this study did not attempt to explain cause and effect for the development of career maturity, it did attempt to determine the relationship between participation in the career center function and student career maturity. This study also attempted to identify and refine conditions under which additional studies might be conducted.

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Definition of Terms

In the interest of clarity, the following terms have been

defined:

- Career center: an information center that contains career-related materials and offers assistance to students, counselors, and other staff members. Each center is unique and serves a specific Clientele with a cluster of services which expresses that particular school's responsibility for the career development of its students.
- Career development: stages or processes which occur throughout one's lifetime that involve experiences and decisions, resulting in the formation of a self concept that is utilized in the selection of both a vocation and avocation.
- Career planning: the process whereby a student examines his/her interests and abilities in regards to certain careers and their accompanying lifestyles.
- Career maturity: the maturity of an individual's vocational behavior as indicated by the similarity between his behavior and that of the oldest individuals in his vocational life stage (Crites, 1961, p. 259).
- Grade level: the actual grade that the subject is in at the time he or she will be tested for career maturity.
- Program of studies: will be determined by the area in which the student has done the majority of his/her elective coursework. The three areas are academic, vocational, and general.
- Voluntary participation: the number of free-willed or unforced visits the student initially makes to the career center. Compulsory attendance is not included. Based on their number of visits, the students will be assigned to the following groups: nonparticipant group (zero visits); low-participant group (1-2 visits); and high-participant group (3 or more visits).
- Paraprofessional (career center aide): maintains and dispenses career information to students and faculty and performs tasks that do not require professional education and training.

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Overview

The organization of this study involves five major chapters. Chapter I serves as the basis for identification of the problem and a rationale for the purpose of the study.

Chapter II constitutes a selected review of the literature. This review covers a number of areas which form the base from which this study was conducted. Although career centers are relatively new to secondary schools, rudiments of their services and activities have occurred to some extent in most guidance and counseling centers. Findings in the review of the literature provide the basis for the hypothesis and research questions of this study.

Chapter III, Design of the Study, identifies the source from which the data were collected, the instruments used in gathering the data and finally a description of the procedure used in an analysis of the data obtained from the respondents.

Chapter IV, Analysis of the Data, describe the administration of the Student Information Questionnaire and the Career Maturity Inventory. A detailed analysis and summary of the data is presented.

Chapter V contains the summary and conclusions of the study with recommendations for future research. A bibliography and appendix are attached.

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Background of Career Education

Although career education has received a great deal of attention during the past five years, it is not a concept that originated in the seventies but is actually as old as the history of man. One only has to briefly scan history to realize that for many centuries knowledge and skills were passed on from one generation to the next. In Coleman's article, "How do the Young Become Adults?" he asserted that "the young learned not only the whole variety of things that one commonly associates with the family, they also learned their principal occupational skills and functions--if not in the family, then structurally close to it in an apprentice relation."¹

¹James S. Coleman, "How Do the Young Become Adults?" <u>Phi Delta</u> <u>Kappan</u>, December 1972, pp. 226-230.

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NJames S. Coleman, "How Do the Young Become Adults: <u>Ent verta</u> Kappan, December 1972, pp. 226-230. This relationship and mode of learning began to change with the Industrial Revolution, when the father began to work in a profession divorced from the home setting. To provide the young with academic and occupational skills, men such as Benjamin Franklin saw the need for a utilitarian education. In 1759, his publication, "Proposals Relating to the Education of Youth in Pennsylvania," recommended the creation of a new type of school known as the "academy."² Franklin advocated a practical and vocational curriculum that would include a study of the English language, mathematics, art, social studies, classics, natural science, and experiences in agriculture and technology. He summed up this view in a plea for support of the English department:

Thus instructed, youth will come out of this school fitted for learning any business, calling or profession, except such wherein languages are required; and though unacquainted with any account or foreign tongue, they will be masters of their own, which is of more immediate and general use; and withal will have attained many other valuable accomplishments; the time usually spent in acquiring those languages, often without success, being here employed in laying such a foundation of knowledge and ability as, properly improved, may qualify them to pass through and execute the several offices of civil life, with advantage and reputation to themselves and country.³

In short, the industrial revolution extensively altered the character of American education.

²R. Freeman Butts and Lawrence A. Cremin, <u>A History of Education</u> in American Culture (New York: Henry Holt and Company, 1953), p. 77.

³Thomas Woody, ed., "Educational Views of Benjamin Franklin," in <u>A History of Education in American Culture</u>, ed. R. Freeman Butts and Lawrence A. Cremin (New York: Henry Holt and Company, 1953), p. 79. This relationship and mode of learning began to change with the

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In the early 1900s, with industrialization escalating, the National Association's Commission of the Reorganization of Secondary Education identified seven "Cardinal Principles of Education," one of which was vocational education."

work, <u>Choosing A Vocation</u>. In this publication, Parsons outlined three steps in the process of selecting a vocation. He considered these procedures necessary for true reasoning or vocational guidance and formulated the following steps:

First, a clear understanding of yourself, aptitude, abilities, interests, resources, limitations and other qualities. Second, a knowledge of the requirements and conditions of success, advantages and disadvantages, compensations, opportunities, and prospects in different lines of work. Third, true reasoning in the relations of these two groups of facts.⁵

⁴S. J. Knezevich, Administration of Public Education, 2nd ed. (New York: Harper and Row, 1969), pp. 6-7.

⁵Frank W. Parsons, <u>Choosing A Vocation</u> (Boston: Houghton-Mifflin Company, 1909), p. 5. During the 1800s, when the rapid industrialization of the mation was occurring. Congress saw the need for agricultural and industrial education and passed the Morril Act of 1862 to give impetus to agricultural education and expanded it in 1867 to include industrial education.

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In 1914 at the convention of the National Vocational Guidance Association and the National Society for the Promotion of Industrial Education, George Mead and John Dewey presented papers to the councils, stressing that democratic education required no "'separation of vocational training from academic training and that vocational training and vocational guidance normally linked together.'⁷ They each advocated a unified system, rather than a dual system, of education."⁸

development of "Life Adjustment" education as a need for a universal education in an industrial democracy. Stratemeyer conceived life adjustment education as having the following two essential elements:

- To help children and youth develop the skills, knowledge and attitudes basic to dealing intelligently with immediate situations of everyday living.
 - At the same time to help them understand the persistent aspects of those situations which recur throughout our lives.⁹

⁶Edwin L. Herr, <u>Review and Synthesis of Foundations for Career</u> <u>Education</u>, Information Series No. 61 (Columbus, Ohio: ERI Clearinghouse on Vocational and Technical Education, The Center for Vocational and Technical Education, Ohio State University, 1972), p. 17.

²Richard W. Stephens, <u>Social Reform and the Origin of Vocational</u> <u>Guidance</u> (Washington, D.C.: National Vocational Guidance Association, 1970), p. 86.

⁸Herr, p. 19.

⁹F. B. Stratemeyer, "Education for Life Adjustment," <u>Philosophies</u> of <u>Education</u>, ed. Philip H. Phenix (New York: John Wiley and Sons, 1961), p. 27. Herr (1972) stated that these three points defined the parameters of what has become known as an actuarial or trait-and-factor appionen to counseling for educational and/or vocational choice.

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9: B. Stratemeyer, "Education for Life Adjustment, "Hitosophica of Education, ed. Philip H. Ebenix (New York: John Wiley and Some, 1961) p. 27. The resources of the school and the community were to be utilized to provide the learning experiences in real life situations.

The outbreak of World War II created a demand for highly trained men and women to serve in the military forces. The schools were severely criticized for not providing the students with the required skills. To overcome this lack of training, after the war ended, five regional conferences were held that brought together secondary school principals and superintendents, vocational educators, state educational department representatives, professors of teacher education institutions and officers of national professional associations. The groups formulated the following issues:

- Secondary education was "failing to provide adequately and properly for the life adjustment of perhaps the major fraction of the persons of secondary school age."
- Fin 2. Functional experiences in the areas of practical arts, of home and family life, health and physical fitness and interface civic competencies "are fundamental to any educational program program designed to meet the needs of youth."
- 3. A supervised program of work experience is essential for most high school youngsters.
- Those entrusted with the education of teachers need "a broadened viewpoint and a genuine desire to serve all vouth."¹⁰

This movement continued in the 1950s with guidance and vocational experts such as Donald Super, Edwin Herr, and Martin Katz, emphasizing the need to make a student's learning more relevant to the real world of work.

¹⁰ Lawrence A. Cremin, <u>The Transformation of the School</u> (New York: Alfred A. Knopf, 1961), p. 355. The resources of the school and the community were to be utilized to provide the learning experiences in real life situations.

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In 1959, James B. Conant, recommended a number of changes to improve the effectiveness of the schools. He stressed such things as the importance of each student having an ultimate vocational goal as a result of his or her overall learning experiences in the comprehensive high school. He advocated the physical integration of vocational and academic programs. He stressed the importance of guidance and counseling services being provided for elementary school children, thus providing a continuum of pupil services and enhancing the developmental process. Conant recommended the removal of curriculum tracks and in its place suggested that counselors should provide assistance for the student in developing individualized programs, tailored to the needs and interests of the individual student and emphasizing course sequences that would lead to "higher education or marketable skills upon graduation."11 However, the "Sputnik" scare of the late 1950s prompted American schools to de-emphasize vocational training and urged students to concentrate on mathematics, the sciences, and college preparatory courses.

This trend continued into the 1960s until it was recognized that the schools were not adjusting their curriculum to the rapidly changing technical society. President Kennedy directed the Secretary of Health, Education and Welfare to appoint a panel of consultants on vocational education. The panel of consultants conducted its review and evaluation of vocational education from November 1961 through

¹¹ James B. Conant, <u>The American High School Today</u> (New York: McGraw-Hill, 1959), p.

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November 1962. The report of this panel stated that (1) vocational education lacked sensitivity to the changes in the labor market and (2) it lacked sensitivity to the needs of various segments of the population.¹²

purpose of which was to stimulate interest in career development and to focus attention on preparing students for job entrance and performance.

The reports of a second panel of consultants to examine the impact of the Vocational Education Act of 1963 indicated that vocational education was still inadequate for women and out-of-school youth, and contained very few meaningful courses and programs available for adults. Their recommendations were reflected in the Education Act Amendments of 1968. The major impetus of this Act provided for occupational awareness and preparation in the elementary schools, economic orientation and continued occupational awareness in the junior high schools, more specific occupational preparation in the high schools and post-secondary programs for improvement and preparation of adults, programs for special helps and needs, upgrading of facilities and equipment by research and innovation, as well as better preparation of the instructional staff.¹³ Some of the early theoretical underpinnings of career education were

¹²U.S., Department of Health, Education and Welfare, Office of Education, <u>Education for a Changing World of Work</u>, Report of the Panel of Consultants on Vocational Education (Washington, D.C.: Government Printing Office, 1964), pp. 180-205. (ED 019 502)

¹³ Advisory Council on Vocational Education, <u>The Bridge Between</u> <u>Man and His Work</u> (Washington, D.C.: Advisory Council on Vocational Education, <u>1968</u>), p. 248. (ED 028 267)

November 1962. The report of this gunal stated that (1) vocational education lacked sensitivity to the changes in the labor market and (2) it lacked sensitivity to the needs of various segments of the population. ¹²

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¹⁸ Advisory Council on Yocastonal Education, (ne. prique uesween Man and His Work (Washingbon, D.C.; Advisory Council on Yocastonal Education, 1968), o. 248. (ED 028 267)

initiated as a result of these acts and subsequent legislation. As noted by High, "a great deal of time-consuming background work had already been done on various elements which could be combined into a career education concept."¹⁴ These projects emphasized the occupational cluster concept, techniques for increasing student awareness of career options, the provision of realistic, hands-on exploratory experiences, "the career-ladder" concept, carefully designed career preparation programs, as well as fresh approaches to the delivery of career guidance services.

The theoretical basis for career education was analyzed by Herr, in his review of the writings of some noted scholars between 1951-1971. A comprehensive analysis of the precedents for career is summarized in the following five statements:

- Virtually every concept which is presently embodied in career education has been advocated at some point in American education. This is not to suggest that such concepts have either been operationalized or tested in practice. Nevertheless, philosophical support for the major elements of career education has historical construct, if not evaluative validity.
- 2. Most of the elements of career education have their roots in early efforts to embody industrial education and, somewhat later, vocational guidance in the public schools. Both vocational education and vocational guidance were direct responses to the needs for distribution, classification, and preparation of manpower occasioned by the rising industrial character of the U.S. in the late 1880's and 90's as well as the first two decades of the twentieth century.
- Advocacy of vocational education and vocational guidance has largely been precipitated by economic and industrial needs, although there have been social reform and social

¹⁴ Sidney C. High, Jr., "A National Perspective on Career Education," Journal of Research and Development in Education 7 (1974): 3-16.

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"Stdney C. High, Jr., "A Mational Perspective on Larger Education," Journal of Research and Development in Education 7 (1974): 3-16. welfare trends running through advocacy of these services. It is apparent that at the present time, as was true in the last decade, this situation has largely reversed with individual needs being considered the major base from which educational programming must begin.

- 4. Until approximately 1960, concern for the vocational needs of individuals was reflected principally in providing different categories of vocational training that were defined by occupational or industrial needs or, in some cases, inertia. Thus, persons needed to be fitted to programs rather than programs fitted to persons. Since 1960, however, increased attention has been focused on the meeds of special groups of persons-i.e., the disadvantaged, the handicapped, the academically retarded--as well as the affective dimensions of employability as reflected in terms such as vocational identity, vocational maturity, and vocational decision-making.
- 5. Although there were antecedents in life adjustment and progressive education positions prior to 1960, since then increased emphasis has been focused on the prevocational elements of decision-making and preparation to be found in the elementary, middle or junior high school educational levels.¹⁵

Thus, the social and economic conditions that arose during the industrial development of the United States have led to the reexamination and realignment of educational process in the form of career education.

Career Development Theory

Although the terms career development and vocational development have often been used interchangeably, they are not regarded as synonymous throughout this study. Instead, career development is viewed as more than vocational development, though the latter is an important component of the career development process. Hoyt and others listed

¹⁵Herr, pp. 29-30.

wettere trends funding through advocaty of these services, It is apparent filt at the present fund, as what the true rathe last decade, this situation has largely reversed with individual needs being considered the major have from which advocations programming must begin.

- Until approximately 1960, concern for the vocational meeds of individuals was beeflected priodinally in providing difterent categories of vocational training that were defined by occupational or industrial meeds or. In some cates, inartis. Thus, persons needed to be fitted to proven rather than programs fitted to presons. Since 1960, nowever, increased attention has been focused on the needs of special groups of persons--i.e., the disadvantaged, the handdicapmed, the academically retarded--as well.as, the special groups of mensions of amployability as reflected in terms such as vocational deficity, vocational maturity, and such as vocational deficity, vocational maturity, and
- Although there were alleadents in life adjustment and progressive adjustion mositions prior to 1960, since then increased explasis may been focused on the prevoational elements of decision-making and unuparation to be found in the elements will decision-making and unuparation in ducational levels.¹⁰

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the following basic understandings of the career development

process: 1011 social faction functions. The new pressures of occupational

- Career development is essentially a lifelong process, beginning early in the preschool years and continuing for most individuals, through retirement.
- Personal choices involved in career development are taking place on a continuing basis throughout the life of the individual. Choices involving personal life-styles, personal values, and leisure time preferences are as much a part of career development as are occupational choices.
- Occupational choices made as part of career development are expressed in many forms and with many degrees of firmness and insight at various times in the life of the individual.
- 4. Choices are, in various stages of career development, made on the basis of what the individual would enjoy doing, on the basis of what appears possible for him to do, given his personal and societal limitations and strengths, on the basis of what seems most important for the individual to do, and, when made in what we call a "mature" way, on the basis of the interaction of all these kinds of factors.
 - In terms of career choices, the prime goal of career development lies in its process, not in its end result.
 - The wisdom of career choice lies in the extent to which and the basis which it is a reasoned choice, not in the degree to which it seems reasonable to others.¹⁶

Although vocational counseling had its beginning in the early 1800s, with Frank Parsons' book entitled, Choosing a Vocation, the concept of career development emerged with the Industrial Revolution. According to Armour (1969), the need for career counseling theories was paramount during Parsons' time. Before the Industrial Revolution,

¹⁶ Kenneth B. Hoyt and others, <u>Career Education: What It Is and How to Do It</u>, 2nd ed. (Salt Lake City, Utah: Olympus Publishing Co., 1974), pp. 136-138.

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Barry points out that "the ground work for modern theories was explored in the early 1930's in Austria and Germany by Charlotte Buehler and Paul Lazarsfeld."¹⁸ Of the two, Buehler's influence was more profound. She suggested that individuals go through the following developmental stages: Growth, Exploration, Establishment, Maintenance, and Decline; and theorized that an individual's vocational development, as well as other aspects of his life, fits into this same pattern. Not until 1951, did American vocational theorists begin to use Buehler's work.

Although several theories or approaches to career development have appeared since the early 1950s, they are not, according to Herr and Cramer (1972), "mutually exclusive or independent but attempt to explain the pattern of human existence which results in differential

¹⁷D. J. Armour, The American School Counselor: A Case Study in the Sociology of Professions (New York: Russell Sage Foundation, 1969), p. 44.

¹⁰Ruth Barry and Beverly Wolf, <u>An Epitaph for Vocational</u> <u>Guidance: Myths, Actualities, Implications</u> (New York: Teachers College, Columbia University, 1962), p. 10.

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vocational behavior and choices."¹⁹ The principles of many theories have served as a foundation for later, more comprehensive theories.

Descriptions of the trait factor approach, decision-making theory, psychological theory, and developmental approaches will be presented herein. However, the developmental approaches to vocational development will be emphasized because they are more inclusive, more concerned with longitudinal expressions of behavior and are more inclined to focus on the individual self-concept.²⁰

Trait-Factor

The trait-factor or actuarial approach to vocational development is the oldest and most direct approach. It is based on the following suppositions: (1) that individual differences can be observed and classified in terms of certain variables such as values, interests, and abilities; (2) that the distinctive characteristics and requirements of an occupation can be classified in a like manner; and (3) that an individual can be matched with an occupation.²¹

The major criticism of this approach is that it does not consider the continuously changing nature of the individual or the environmental situations which an individual encounters and must adapt to throughout his life. A recent modified trait-factor approach rejects this classification position as too simplistic.

¹⁹Herr and Cramer, p. 47.

²⁰ Ibid., p. 30.

²¹Edwin L. Herr, <u>Decision-Making and Vocational Development</u>, <u>Series IV: Career Information and Development</u>, Guidance Monograph Series (Boston: Houghton-Mifflin Co., 1970), p. 18.

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³¹Edwin L, Herr, <u>Decision-Haking and Vocational Unveilagent</u> Series IV: <u>Career Information and Development</u>, <u>Guidance Konograpp</u> Series (Boston: Nucghitan-MTR) nr. (Do., 1970), p. 18. It emphasizes, instead, the identification of factors which influence the sequence of vocational decisions or choices and it recognizes that what has often been called occupational choice is actually the product of a succession of choices; each decision being the result of positive and negative influencing factors. These factors represent a combination of social, economic, and psychological forces which result in a choice.²²

However, the trait-factor approach has provided both the means for appraising various traits found to be of relevance in occupational satisfaction as well as the impetus for more recent theories of career development.

Decision-Making

Implicit derivatives of the trait-factor approach are the attempts to theorize about vocational development through the decisionmaking process. These approaches are based upon economic theory: an individual will choose from among his alternatives a career or occupational goal that will maximize his gain and minimize his loss. This infers that an individual has several vocational alternatives and that he will choose a career or occupational goal that will provide greater prestige, financial benefits, security or social mobility. In these approaches it is assumed that an individual can be assisted in his prediction of the outcome of various alternatives and that he will choose the one that promises the most reward for his investment and and the least probability of failure. Herr cited the following inputs to this approach:

²² Donald E. Super and P. B. Bachrach, <u>Scientific Careers and Vocational Development Theory</u> (New York: Bureau of Publications, Teachers College, Columbia University, 1957), p. 101.

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- Choice occurs under conditions of uncertainty or risk. (Brayfield and Crites, 1964)
- A choice between the various possible courses of action can be conceptualized as motivated by two interrelated sets of factors: the individual valuation of different alternatives and his appraisal of his chances of being able to realize each of the alternatives. (Blou et al., 1956)
- The process of making a decision between uncertain outcomes requires reconciliation of several general factors: the relative valuing of the outcomes, the cost of attaining the outcomes, and the probability that each outcome may occur. (Davidson et al., 1957)
- Decision-making includes the identifying and defining of one's values; what they are and what they are not, where they appear and where they do not.²³

While the decision-making approach has made some significant contributions to vocational development theory, it assumes a rational and logical vocational development with little regard for an individual's cultural and social environment in which he is exposed to the alternatives he can pursue.

Psychological

The emphasis of psychological approaches to career development centers on the intrinsic motivation of an individual. The major assumption is that differences in personality structure reflect different need predispositions, the satisfaction of which is sought through certain career choices, thus, one can postulate that various career areas attract individuals of certain personality types.

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Roe, who began her research in the 1950s, applied Maslow's theory of needs to vocational behavior and examined the relationship between early home environments, personality manifestations, and occupational choice. According to Osipow, Roe also cited the importance of genetic factors as they interact with need hierarchies to determine vocational behavior and choice. "In other words, given 'equal' endowments genetically, differences in occupational achievement between two individuals may be inferred to be the result of motivational differences which, theoretically, are likely to be the outcome of different kinds of childhood experiences."²⁴

particul Among the constructs she suggested are:

- Personality differences, evolving from different childrearing practices, exist and are related to the kinds of interaction that persons establish with other persons-toward or away from--and with things.
- Securing opportunities to express individual style of behavior is inherent in choices made and in vocational behavior. In this sense, occupational choices are processes of self-categorization.
- 3. One can describe the occupational structure in terms of fields--service, business contact, organizations, technology, outdoor, science, general cultural, arts and entertainment--which describe more or less an orientation to or away from people or things as well as levels of activity--professional and managerial, semiprofessional, skilled, unskilled--which represent complexity, responsibility, education, and to some degree genetic heritage reflected in career mobility. At a psychological level, such a theoretical position validates the increased concern for dealing with occupational clusters.²⁵

²⁴Samuel H. Osipow, <u>Theories of Career Development</u>, 2nd ed. (New York: Meredith Corporation, 1973), p. 16.

²⁵Herr, <u>Review and Synthesis of Foundations for Career Education</u>, pp. 62-63. Role, who mean her research in the 1950s, applied Maslow's theory of meds to vocational behavior and examined the relationship between early home environments, personality nanifestations, and occupational choice. According to Gsipow, Rue also cited the importance of genetic factors as they interact with need hierarchies to determine vocational behavior and choice. "In other words, given 'equal' endowments genetically, differences in occupational achievement between two individuals may be inferred to be the result of motivational differences which, theoretically, are likely to be the accords of different kinds of childhood experiences."¹¹

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²⁵Herr, <u>Review and Synthesis of Foundations for Career Education</u>, 62-63. Holland's approach to vocational development, stressed the personality type or behavioral style, as the major influence in vocational choice. He identified major life styles or behavioral orientations from which predictions could be made concerning career decisions, with respect to specific choices as well as some of the dynamic features that underlie the decision-making process.

Holland further identified six basic personality types, each associated with an environmental model against which an individual could be measured. These models identified various life styles or ways in which an individual solved problems and interacted with his particular environment. The six styles are:

Realistic. Individuals of this orientation select activities that require physical, mechanical and psychomotor skills, lack verbal and interpersonal skills, and prefer well-defined activities. Occupational preferences include aviation, engineering, mechanical trades and agriculture.

Intellectual. Individuals of this orientation are taskoriented, possess high scientific, verbal and math ability, have a need to understand and organize the world, avoid interpersonal activities and prefer abstract, highlyunstructured problems. Occupational preferences include various scientific areas such as an inventor, scientist, mathematician and anthropologist.

Social. Individuals of this orientation reflect a desire for attention and socialization in a structured, safe setting, are socially oriented, humanistic and religious, possess well-developed verbal and interpersonal skills and avoid problem-solving or highly ordered activities. Occupational preferences include teaching, social work and the ministry.

<u>Conventional</u>. Individuals of this orientation prefer structured and subordinate roles, are dependent and conforming, value hard work and achievement, are effective in well-structured tasks and identify with power and status. Preferred occupations are accounting, clerical, statistician and bookkeeper. Holland's approach to vocational development, stressed the

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<u>Artistic</u>. Individuals of this orientation prefer indirect relationships with others, are introverted, expressive and very artistic and avoid situations that require interpersonal interaction. Occupations representing this type are poet, sculptor, composer and actor.²⁶

Holland's theories have been rendered operational and the instruments he has developed, the Vocational Preference Inventory²⁷ and the Self-Directed Search,²⁸ have been widely utilized.

In summary, Holland's approach to vocational development and choice emphasizes the interaction between one's personality and the environment. Thus, individuals pursue occupations and settings that will permit the expression of their personality styles.

Developmental

As noted in the previous theories, the career development process progresses through an ordered sequence of life stages in which there is an accumulation of learning experiences and the mastery of various coping techniques. The relating of developmental tasks to the vocational life stages has, according to Herr and Cramer (1972), "received the most continuous attention, stimulated the most research,

²⁶ John L. Holland, <u>Making Vocational Choices: A Theory of Careers</u> (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973), pp. 13-18; and John L. Holland, "A Theory of Vocational Choice," <u>Journal of</u> Counseling Psychology 6 (January 1959): 35-44.

²⁷ Holland, <u>Making Vocational Choices: A Theory of Careers</u>, pp. 108-109.

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One of the earliest approaches concerning the vocational life stages was formulated by Ginzberg (often considered the founder of vocational development theory) and his associates. Their basic assumption was that an individual reaches his ultimate decision, through a series of decisions over a period of years. The three elements of this theory are:

- 1. Occupational choice is a developmental process which occurs over a period of years.
- 2. The process is largely reversible.
- The process of occupational choice ends in a compromise between interests, capacities, values and opportunities.³⁰

In analyzing the occupational decision making process, Ginzberg cited three periods or phases. The first of these three phases is the period of fantasy choice (age 6 to 11), during which time the child believes he/she can become whatever he/she wants to become. In the second or tentative period (age 11 to 17), choices are determined largely by subjective factors such as interests, capacities and values. The third period, termed realistic (age 17 and on), is characterized by stages of exploration, crystallization and specification.³¹

²⁹ Herr and Cramer, p. 49.

³⁰ Edward M. Treanor, ed., <u>Readings in Career Development</u> (New York: MSS Information Corporation, 1972), p. 32.

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Super's initial approach to a theory of vocational development began as a critique of the efforts of Ginzberg. He either confirmed, refined, or rejected Ginzberg's speculations about career development theory. Basically his criticism centered around the inadequacy of Ginzberg's position in terms of distinctiveness of life stages and of a need for further clarification of concepts.

The work of Super and his colleagues has become the most comprehensive of the theoretical approaches currently available. Herr condensed these constructs into the following components:

- deep1. There is a stress on the essential interdependence of the personality and vocational development.
- 2. The primary construct in career developments is the development and implementation of the self-concept. The individual chooses occupational or educational and alternatives which will allow him to function in a second role consistent with his self-concept.
- The self-concept is a function of one's developmental history.
- Career development proceeds through a series of increasingly complex vocational developmental tasks different life stages.
 - 5. Life stages can be defined in gross terms as growth, exploration, establishment, maintenance and decline. Each of these is susceptible to being subdivided into further tasks and demands.
 - 6. Factors existing internally and externally to the individual influence the choices made. These factors continue to narrow the options the individual will consider. Development describes a process of convergence, synthesis and increasing specificity.
 - 7. The concept of vocational maturity is amenable to definition at different ages.
 - 8. There is importance to acquiring vocational maturity of occupational information (educational, psychological

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and economic) as well as planning, independence, crystallization of interests, and specifications and implementations of preferences.³²

According to Barry, Super and his colleagues were "pattern" theorists. They "offered a pattern theory as a hypothesis and then, on the basis of some of the generalizations in this hypothesis, attempted to formulate further generalizations about individual development and choices. Thus, out of pattern theories came individual theories.³³

As pointed out by Osipow (1972), Super appears to have been deeply influenced by the self-concept theory, illustrated in the writings of Rogers (1942 and 1951), Carter (1940), and Bordin (1943), as well as Buehler's writings on life stages.¹⁴ Super inferred that an individual tries to implement his self-concept by entering a profession that allows him self-expression. In turn, the behavior utilized by the individual to implement his self-concept reflects his stage of development. Central to this theory is the distinction between the psychology of occupations and the psychology of careers:

The psychology of occupations is based primarily on differential psychology and on the assumption that once an individual and a career are matched they will "live happily ever after." The psychology of careers on the other hand, stemming from developmental psychology, rests on the assumption that career development, which is fundamentally evolutionary in nature.

³² Herr, <u>Review and Synthesis of Foundations for Career Education</u>, pp. 59-60.

³³Barry and Wolf, pp. 9-10.
³⁴Osipow, p. 131.

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and economic) as well as planning, independence, crystallization of interests, and specifications and implementations of preferences.¹²

According to Barry, Super and his colleagues were "pattern" theorists. They "offered a pattern theory as a hypothesis and then on the basis of some of the generalizations in this hypothesis, attempted to formulate further generalizations about individual development and choices. Thus, out of pattern theories came individual theories.¹¹

As pointed out by Origow (1972), Super sphears to have been deeply influenced by the self-concept theory, filustrated in the mittings of Rogars (1947 and 1931, Farter (1940), and Bordin (1943), as well as Buehker's writings on 1116 stagss.³⁴ Super inferred that an individual tries to inflerent his unit-concept by entering a profession that allows his self-sume on 111 turn, the behavior utifited by the individual to inclement his unit-concept reflects his stage of development. Central to bits theory is the distinction research the sevenations and the usychology of centeers:

The psychology of occupations is based primarily on antrerential psychology and on the assumption folds once an individual rand a career are matched they will "I've hapfily even atter." The psychology of careers on the other hand, semming from developmental psychology, rests on the assumption that career which is which is a fundamental prediptor of human development enforms with the general principles of human

¹² Herr, <u>Review and Synthesis of Foundations for Career Education</u>, 59-50.

Barry and Wolf, pp. 9-10.

- 88

Vocational psychology is the term Super chose to represent the field of study resulting from the fusion of the two streams of thought. Since the methods and tools of vocational counseling are currently more suitable to the study of the psychology of occupations than the psychology of careers, Super asserts that the latter has been neglected in favor of the former.³⁵

Thus, the career pattern approach implies that individuals encounter different vocational tasks as they proceed through their life cycle. To fully understand an individual's vocational life, the entire life cycle must be examined.

Super's approach to career development seems to be wellorganized and comprehensive. However, according to Osipow, "Super still must devise a way to include economic and social factors which may influence career decisions in a more direct way than the events described by the theory currently do, as well as to continue the development of specific and rigorous formulations about aspects of career decisions and ways to bring about appropriate behavioral changes which will facilitate vocational maturity."³⁶

A plethora of research has been published since Super's original work, some of the most notable being done by Tiedeman. He conducted research based upon the development of mathematical models. He surveyed many of the vocational theories and viewed vocational choice in a manner similar to Super. Tiedeman defined vocational development as "self-development viewed in relation with choice, entry and progress in educational and vocational pursuits. It is a process

³⁵ Ibid., pp. 132-133.
³⁶ Ibid., p. 168.

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> ³⁵ Ibid., pp. 132-133. ³⁶ Ibid., p. 158.

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occurring over time in man who is capable of anticipation, experience, evolution and memory." He continued, "vocational development not only occurs within the context of a single decision; vocational development ordinarily occurs within the context of several decisions."³⁷ Thus, according to Tiedeman and O'Hara, the decision-making process is central to vocational development.³⁸ They explained the decisionmaking process as:

When one chooses on a rational basis, he has the opportunity to lay out alternatives, to assess both wishes and risks, to examine favored alternatives, to construct a definition of himself in the situation which guides his pursuit of the elected course.³⁹

Tiedeman and his associates proposed several constructs concerning career development. Herr listed them in the following manner:

- The evolution of vocational identity is dependent upon early childhood experiences with the family unit, the psychological crises... as defined in terms of Erickson's (1963) constructs... encountered at various developmental stages and the agreement between the society's meaning system and the individual meaning system.
- The intimacy of the self-concept and career concept is don't to be considered.
- Individual personality is shaped by perceptions of career choices and to some degree by the individual's conformance to the norms and values of those persons already established within the vocational setting.

³⁷David V. Tiedeman, "Decision and Vocational Development: A Paradigm and Its Implications," <u>Personnel and Guidance Journal</u> 40 (September 1961): 18.

³⁸David V. Tiedeman and Robert P. O'Hara, <u>Career Development:</u> <u>Choice and Adjustment</u> (New York: College Entrance Examination Board, 1963), p. 34.

39 Ibid.

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⁴⁹David V. Tiedeman and Robert P. O'Mara, Larger Levelopment: Dhoice and Adjustment (New York: College Entrance Examination Scard, 1963), p. 34.

pp

- 4. A view of career development life stages can include two gross substages: anticipation of preoccupation with career goals and implementation or adjustment. Each of these has substages. The substages of the former include exploration, crystallization, choice and clarification. The substages of the latter include social induction, reformation and integration.
- 5. Career development is a continuing process of differentiating ego identity.
- The school system or guidance methods can order the stages of career development and personal trends can be given new directions or reversed.
- The individual's perceptual structure of work is the g, and gyroscope directing his career.
- 8. The power of an individual's purpose to shape choice and action must be realized.
- them earlier.
- 10. It is possible to choose educational and vocational pursuits on a rational basis . . . when one chooses on a rational basis he has the opportunity to lay out alternatives, to assess both wishes and risks, to examine favored alternatives, and to construct a definition of himself in situations which guide his pursuit of the elected course.⁴⁰

Corresponding to Tideman's decision-making process of career development are the developmental tasks that enhance an individual's vocational growth. In his book <u>Human Development and Education</u>, Havighurst published material about developmental tasks for children, adolescents and adults. He emphasized that the developmental task concept determines either vocational success or failure:

⁴⁰ Herr, <u>Review and Synthesis of Foundations for Career Education</u>, pp. 60-61.

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A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks.⁹⁴

In addition, Havighurst described developmental tasks that are characteristic of different periods within the life span: infancy and early childhood, middle childhood, adolescence, early adulthood, middle age, and later maturity. Some of the tasks of middle childhood are developing fundamental skills in reading, writing, calculating, and developing a conscience, morality, and a set of values. Some of the tasks of adolescence, according to Havighurst's formulations, are selecting and preparing for an occupation, developing intellectual skills and concepts necessary for civic competence, and preparing for marriage and family life. Some of the tasks of early adulthood and middle age as described by Havighurst are managing a home, getting started in an occupation, taking on civic responsibility, and developing adult leisure-time activities. Havighurst further asserts that "there is no development task of children or adolescents which the school can completely ignore, for the reason that the tasks are so closely interrelated that difficulty in one task, which may show in school, is often tied up with difficulty in another task for which the school has little direct responsibility."42

⁴¹Robert J. Havighurst, <u>Human Development and Education</u> (New York: Longmans, Green and Co., 1953), p. 2.

⁴² Ibid., pp. 29-30.

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A number of other theorists have linked specific developmental tasks with stages of increasing vocational maturity. Zaccaria asserted that those who formulate developmental tasks generally agree with the following statements about human development and the role of developmental tasks.

1. Individual growth and development is continuous.

- Individual growth can be divided into periods or difference life stages for descriptive purposes.
- Individuals in each life stage can be characterized by certain general characteristics that they have anterity in common.
 - Most individuals in a given culture pass through similar development stages.
 - 5. The society makes certain demands upon individuals.
 - These demands are relatively uniform for all members of the society.
 - 7. The demands differ from stage to stage as the individual goes through the developmental process.
 - Developmental crises occur when the individual perceives the demand to alter his present behavior and master new learnings.
- In meeting and mastering developmental crises, the Unidividual moves from one developmental stage of maturity to another developmental stage of maturity.
 - 10. The task appears in its purest form at one stage.
 - Preparation for meeting the developmental crises or developmental tasks occurs in the life stage prior to the stage in which it must be mastered.
- The developmental task or crises may arise again during a later phase in somewhat different form.
- The crises or task must be mastered before the individual can successfully move on to a subsequent developmental stage.

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 - The crises or task must be mastered before the individual can successfully move on to a subsequent developmental stage.

- Meeting the crises successfully by learning the required task leads to societal approval, happiness, and success with later crises and their cumulative tasks.
- Failing in meeting a task or crises leads to disapproval by society.⁴³

Gribbons and Lohnes' ten-year longitudinal study, "Readiness for Vocational Planning" (RVP),"⁴ added some theoretical validity to the work of Super and Tiedeman. It indicated the existence of differing patterns of career development in different students. These patterns denoted the following varying levels or types of vocational maturity:

- Constant Maturity: Consistent, persistent, realistic pursuit of the first stated goal.
- Emerging Maturity: Passage through the stages and task of Super's developmental model.
- Degeneration: Progressive deterioration of aspirations and achievements, accompanied by frustration and loss of status.
- Constant Immaturity: Persistent fixation on fantastic unrealistic goals with no advances in achieved level.⁴⁵

In addition, Gribbons and Lohnes asserted that "vocational maturity is a most meaningful developmental concept, that is emergent with the passage of time, that is persistent over time and that it is differentiated into a multidimensional syndrome of traits, the kernel of which is informed planfulness."¹⁶

⁴⁴Warren D. Gribbons and Paul R. Lohnes, <u>Emerging Careers</u> (New York: Teachers College Press, Columbia University, 1968), pp. 103-104.

⁴⁵ Ibid., p. 104.

46 Ibid., p. 103.

⁴³ Joseph S. Zaccaria, "Developmental Tasks: Implications for the Goals of Guidance," <u>Personnel and Guidance Journal</u> 44 (December 1965): 373.

Concept of Vocational Maturity

Background

The concept of vocational maturity was first referred to by Ginzberg and his associates:

The way in which a young person deals with his occupational choice is indicative of his general maturity and, conversely, in assessing the latter, consideration must be given to the way in which he is handling his occupational choice pattern.⁴⁷

Super extended this concept by delineating the following

dimensions of vocational maturity:

- Orientation to Vocational Choice. This focused on the individual's concern with the eventual need for a choice and the awareness of factors and resources to be considered in making decisions.
- 2. Information and Planning. This encompassed the realistic information an individual had about a preferred occupation and the extent and specificity of planning for that preferred occupation.
- Consistency of Vocational Preferences. This dimension involved the consistency of vocational preferences that was verified by an individual consistently indicating preferences in the same field or level over a period of time.
- 4. Crystallization of Traits. This element concerned the stabilization of psychological characteristics and increasing vocational independence.
- 5. Wisdom of Vocational Preferences. This dimension pertained to the level of agreement between an individual's interests, abilities and the socioeconomic accessibility of their vocational preferences.⁴⁸

⁴⁷Eli Ginzberg and others, <u>Occupational Choice:</u> An Approach to <u>a</u> General Theory (New York: Columbia University Press, 1951), p. 60.

⁴⁸ Donald E. Super and others, <u>Vocational Development: A Frame-</u> work for Research (New York: Teachers College Press, Columbia University, 1957), pp. 59-63. Super further asserted that an individual's degree of vocational maturity is determined by his position among these dimensions in regard to either his chronological age and expected life stage or the behavior displayed by others in coping with the same developmental tasks.

In 1961, Crites further refined the concept of vocational maturity by attempting to consolidate the various definitions of vocational maturity, which he asserted were "highly metaphorical and convey many surplus meanings which confuse rather than clarify the development of measurement procedures."⁴⁹ He suggested that the first two definitions referred to an absolute degree of vocational development while the latter three referred to a relative degree of vocational development. The five definitions of vocational maturity included:

- the place reached on a continuum of vocational development from exploration to decline;
- the identification of an individual's life stage by the developmental tasks with which the individual is dealing;
- the ratio of the vocational life stage to the chronological age;
- 4. the ratio of the vocational life stage to expected life stage; and
- 5. the ratio of the vocational life stage to the behaviors of others.⁵⁰

⁵⁰Ibid., p. 256.

37

⁴⁹ John O. Crites, "A Model for the Measurement of Vocational Maturity," Journal of Counseling Psychology 8 (1961): 255.

Crites criticized these definitions for two reasons. First, he noted that by using one definition a person could be identified as immature. Second, there was not an appropriate model to measure vocational maturity. Consequently, Crites proposed a more precise definition of vocational maturity. His construct stated that:

- The degree of vocational development refers to the maturity of an individual's vocational behavior as indicated by the similarity between his behavior and that of the oldest individuals in his vocational life stage.
- 2. The rate of vocational development refers to the maturity of an individual's vocational behavior in comparison with that of his age group.⁵¹

Related Research

The most relevant studies dealing with vocational maturity are the Career Pattern Study (CPS) conducted by Super and associates and the Project on Readiness for Vocational Planning (RVP) carried out by Gribbons and Lohnes.

The Career Pattern Study is a 20-year longitudinal study that focused primarily upon the exploratory and establishment steps of vocational development. The initial findings reported by Super and Overstreet concluded that vocational maturity in ninth grade boys consisted of two factors: (1) orientation to choice tasks and (2) the use of resources. In addition, the authors also noted that the factors of consistent or realistic preferences, well defined interests

⁵¹ Ibid., p. 259.

or work values and former independent work experience, were unrelated

to the vocational maturity of ninth grade boys.⁵²

Super and Overstreet classified the correlates of vocational maturity in five categories:

- 1. Biosocial factors. Intelligence was related to vocational maturity.
- 2. Environmental factors. Vocational maturity correlated positively with parental occupational level, the amount of family cohesiveness and cultural stimulation, and curriculum choice. There was no significant relationship between vocational maturity and place of residence (rural versus urban) or religious affiliation (Protestant versus Catholic).
- 3. Vocational factors. The vocational aspirations of the boys and the degree of congruence between levels of aspiration and expectation were closely related to vocational maturity.
- 4. Personality factors. Psychological adjustment, measured by the Thematic Appreception Test and the Incomplete Sentence Blank, did not have any relation to vocational maturity.
- Achievement factors. Positively correlated to vocational maturity were grades, achievement, independence and extra-curricular activities.⁵³

The RVP study by Gribbons and Lohnes was viewed as a measure

of vocational maturity. This investigation was modeled after the Career Pattern Study and revealed eight variables which in combination correlated to a high degree with readiness for vocational planning. The variables were:

⁵² Donald E. Super and Phoebe L. Overstreet, <u>The Vocational</u> <u>Maturity of Ninth-Grade Boys</u> (New York: Bureau of Publications, Teachers College, Columbia University, 1960), p. 60.

⁵³ Ibid., pp. 76-103, 146-147.

- 1. Factors in curriculum choice;
- 2. Factors in occupational choice;
- 3. Verbalized strengths and weaknesses;
- 4. Accuracy of self appraisal;
- 5. Evidence for self rating;
- 6. Interests;
- 7. Values; and
- 8. Independence of choice.⁵⁴

Gribbons and Lohnes concluded that RVP scores were not significantly related to socioeconomic level but were significantly related to level of occupational choice. A comparison of college preparatory, business, industrial arts and general students revealed that the college preparatory attained the highest RVP scores.⁵⁵

Dilley (1965) compared three known correlates of vocational maturity (intelligence, achievement, and participation in extracurricular activities) with an instrument designed to measure decisionmaking ability (DMI). The DMI was administered to a random selection of 174 high school seniors. Dilley concluded that decision-making ability was correlated with high intelligence, high achievement and

⁵⁴Warren D. Gribbons and Paul R. Lohnes, "Relationships Among Measures of Readiness for Vocational Planning," <u>Journal of Counseling</u> <u>Psychology</u> 11 (1964): 15.

⁵⁵Warren D. Gribbons and Paul R. Lohnes, "Validation of Vocational Planning Interview Scales," <u>Journal of Counseling Psychology</u> 11 (1964): 23-24.

high participation in extracurricular activities. Thus, he reasoned that decision-making ability and vocational maturity were related.⁵⁶

Cover (1968), using Crites' Attitude Scale of the CMI, sought to determine the relationship between the vocational maturity of male high school seniors and the following: alienation from society, school achievement, scholastic ability, socioeconomic level, decision-making, and previous work experience. The results indicated that the best predictors of vocational maturity were school ability, the belief that events have meaning, the ability to make a post-high-school decision, the absence of social isolation, the possession of previous work experience and the feeling that events can be controlled.⁵⁷

Another investigation that examined the influences on the vocational development of secondary school students was done by Mintzer (1967). The results indicated that vocational maturity was a developmental process, and that there were sex differences in that development. Girls scored higher than boys at every grade level. The variables of self-concept, sex role identification, and intelligence were tested as predictors of vocational maturity, their degree of correlation and as components in the development. The findings revealed that self-concept was a predictor of vocational maturity, was weakly correlated with vocational maturity, and was not developmental. Sex role identification

41

⁵⁶ Josiah S. Dilley, "Decision-Making Ability and Vocational Maturity," Personnel and <u>Guidance Journal</u> 44 (December 1965): 423-427.

⁵⁷John A. Cover, "The Relationship of Alienation from Society and Selected Variables to Vocational Maturity in Male High School Seniors," Dissertation Abstracts 29 (1968): 3414-A.

was not shown to be a predictor of vocational maturity, had a low correlation with vocational maturity, and was not developmental. Intelligence was also shown to be a poor predictor of vocational maturity, was weakly correlated with vocational maturity, and was not developmental.⁵⁸

In a related study, English (1974) measured the effects of two occupational information systems on the vocational maturity of high school seniors. The two systems were the VIEW system and the Guidance Information System, a computerized guidance system. The results indicated that: (1) both occupational information systems significantly increased certain aspects of the vocational maturity scores of the students; (2) increased exposure to both experimental conditions did not significantly increase the vocational maturity scores of the students; (3) increased exposure to either experimental condition did not significantly increase the vocational maturity scores of the students; (4) there was no difference between male and female responses to the experimental conditions in terms of gains in vocational maturity.⁵⁹

⁵⁸ Rhoda Greenberg Mintzer, "Vocational Maturity and Its Relationship to Intelligence, Self-Concept, Sex Role Identification, and Grade Level," Dissertation Abstracts 37 (1976): 2643-A.

⁵⁹ Thomas W. English, "A Comparison of the Effects of Two Methods on Disseminating Occupational Information on the Vocational Maturity of Senior High School Students," <u>Dissertation Abstracts</u> 35 (1974): 1976-A-1977-A.

The Development of Career Centers

Throughout their education, students both past and present have always had to deal with questions such as: Do I have the ability to pursue a college education? What skills do I possess or can I develop skills that will enable me to attain success and enjoyment in a particular occupation? How can I learn about the type of work I find more interesting, plus the qualifications needed for selected professions?

To satisfy their inquiries, students often viewed the school as the agency that could provide the answers to these and other questions. In order to adequately respond to this challenge the schools had to not only provide the students with the career information they needed, but also to motivate them to participate in career development activities.

Need for Career Centers

In his analysis of guidance services in the United States, Ginzberg (1971) emphasized that students need to be provided with information about themselves and the world of work. He stressed the need for counselors to utilize this information to help students increase their awareness to available options, to demonstrate and encourage them to explore their alternatives, and to assist them in interpreting the information to which they have access.⁶⁰

⁶⁰Eli Ginzberg, <u>Career Guidance: Who Needs It; Who Provides It;</u> <u>Who Can Improve It?</u> (New York: McGraw-Hill Book Company, 1971), p. 187.

Clark, Gelatt and Levine proposed the following assumptions in regards to the relationship of information to career decision-making.

- The possession of relevant information is a necessary condition for good education-vocational decision-making. Although the use of relevant information by no means guarantees the "right" decision, "good" decision-making cannot occur without it.
- 2. The greater the degree of relevant information possessed by the student, the greater will be his potential for engaging in "good" decision-making.
- The information important to a broad range of educationalvocational decisions can be reduced to a few basic classes. It is possible to analyze most situations accordingly and to determine much of the specific information that would be relevant.⁶¹

Based on these assumptions, the following proposal for the

improvement of high school guidance services was recommended:

Greater efforts should be made to determine what specific information is relevant to the educational-vocational decisions faced by high school students, to gather and organize that information, and to help students learn to use it effectively.⁶²

In the same study, Clarke, Gelatt, and Levine suggested that ". . . the greater the knowledge a student has concerning possible sequences of experiences that lead from his present situation, the more likely he will be able to direct his development toward the outcomes he desires."⁶³

⁶² Ibid., p. 41.

⁶¹Robert Clarke, H. B. Gelatt, and Louis Levine, "A Decision-Making Paradigm for Local Guidance Research," <u>Personnel and Guidance</u> Journal 44 (September 1965): 41.

In a nationwide study by Perrone, in which high school guidance counselors evaluated two types of occupational information (descriptive and outlook) for students that (1) planned to attend college, (2) planned to pursue vocational or technical training, and (3) planned no further educational training, the following disclosures were suggested:

<u>Descriptive Information</u>: Consisted of a total description of a particular job in terms of what must be done, with what tools, in what surroundings, by what kinds of people and the rewards for executing these activities. In addition, it included the requirements for obtaining a job and information on training and educational opportunities.

<u>Outlook Information</u>: Consisted primarily of data on future employment prospects for certain occupations. It also included information on current demands of certain occupational fields from which one could project to the future and more general facts about the labor market and employment trends.⁶⁴

Perrone noted that less than half (42%) of the high school graduates enter college or junior college. He continued:

The remainder enter work or a work preparatory program right out of high school. These student groups must make definite vocational decisions sometime in their senior year. Accurate and comprehensive information are essential ingredients of intelligent vocational decision-making by these students. Yet, counselors cited this group as the one for which available information is poorest.⁶⁵

In a related study by Predeger, Roth and Noeth (1973) it was

noted that junior and senior high school students desired more help in

⁶⁵ Ibid., p. 29.

⁶⁴ Philip A. Perrone, <u>A National School Counselor Evaluation of</u> <u>Occupational Information</u>, Research Report (Madison: Center for Studies in Vocational and Technical Education, University of Wisconsin, April 1968), p. 8.

making career decisions. Many of them revealed that they were unable to secure the help they desired and felt the guidance services of the school were of little assistance.⁶⁶

Daley (1973) suggested that schools should provide walk-in centers to stimulate the career development of students, parents, and others. These centers, depending on their extensiveness could be staffed by counselors or merely containing a collection of career information and materials.⁶⁷

The need for a facility to deliver career information to students was further validated by Grow (1976). He surveyed 40 career educators and architects and had them rate educational facilities in terms of importance, plausibility, and desirability for accommodating career education program. The participants ranked a career information resource center as one of the most important facilities for the delivery of career education programs and activities.⁶⁸

⁶⁶D. J. Predinger, J. D. Roth, and R. J. Noeth, "Career Development of Youth: A Nationwide Study," <u>How Career Choices</u> <u>Are Made</u>, ed. Stephen G. Weinrach (New York: MSS Information Corporation, 1975), pp. 208-214.

⁶⁷Thelma T. Daley, "Career Development: A Cooperative Thrust of the School and Its Community," Essays on Career Education, eds. L. McClure and C. Baun (Portland, Ore.: Northwest Regional Educational Laboratory, 1973), p. 90.

⁶⁸Bruce A. Grow, "Guidelines for the Planning for Career Education Facilities by Career Education Planning District Councils in Michigan" (Ph.D. dissertation, Ohio University 1976), pp. 235-236.
Emergence of the Career Center Concept

According to Meerbach, the following four factors led to the emergence of the Career Center as an important factor in the school guidance program.

- 1. Concern with the capacity of existing guidance programs to affect career planning and choice significantly and positively.
- 2. The emergence of career education as a vital thrust in education placed new demands on guidance.
- 3. Individualized instruction and other innovative educational techniques offered new ways of accomplishing old tasks.
- Media and technology use in school has increased at a dramatic rate, impelled to a great extent by the career education movement.⁶⁹

Before the establishment of Career Centers and because of insufficient space for materials in the counseling offices, most of the educational, career and vocational information needed by students was stored in a variety of places, such as libraries, old storerooms, and reception room alcoves. With the advent of the Career Center, this information can be centralized for greater student access and utilization.

Dittenhafer and Lewis (1973) stated that the purpose of a Career Center is to provide career information to students, staff, parents, and others. In addition, the center should determine the

⁶⁹ John Meerbach, <u>The Career Resource Center</u> (Ann Arbor: ERIC Counseling and Personnel Services, Information Center, University of Michigan, 1975), pp. 2-3.

information needs of its clientele and provide a range of materials

to meet the needs.⁷⁰

The following objectives were listed by Dittenhafer and Lewis as inherent in the operation of any center.

- 1. To collect, evaluate and disseminate accurate and relevant career information.
- 2. To provide assistance to the center's clientele in locating, evaluating and using career information.
- 3. To help students integrate self-knowledge with relevant career information by providing counseling services.
- 4. To assist the faculty in integrating information into their instructional activities to support the student's career development.
- 5. To assist parents in becoming active, concerned and understanding participants in the career development of their children.
- 6. To utilize community resources in fostering a better understanding of the relationship of education to work.⁷¹

These objectives focus on the needs of the potential users of

the Career Center and stress the importance of the information dissemination in the career development process.

Jacobson views Career Centers as a means of increasing student awareness by providing them with assistance and information when they are preparing for careers.⁷² In his report on Career Centers in four

⁷⁰ C. A. Dittenhafer and J. P. Lewis, <u>Guidelines for Establishing</u> <u>Career Resource Centers</u> (Harrisburg: Pennsylvania Department of Education, 1973), p. 1.

⁷¹ Ibid.

⁷² Thomas J. Jacobson, "Career Guidance Centers," <u>Personnel and</u> <u>Guidance Journal</u> 50 (March 1972): 599.

high schools, Jacobson noted that each had brought together all the career guidance functions of the school in one location because it seemed that students did not accurately perceive the relationship between their work experience and the guidance program. He further noted that the most striking differences between the operation of a Career Center and a traditional high school guidance program was that the easy accessibility of the centers attracted more students and the counselors experienced increased effectiveness.⁷³

Vocational and work experience students, who previously did not find the typical guidance program meeting their needs, made greater use of the centers' activities and programs. It was also noted that college preparatory students increasingly utilized the facilities for research on colleges and other college-related information.

Increased counselor effectivenss was attained through the use of paraprofessional assistance in the center. The needs of many students were met through referrals by the paraprofessionals to various information and materials.

Of the counselors surveyed by Jacobson, the following suggestions were made for the implementation and operation of a center.

- Provide for full-time paraprofessional help. The paraprofessional, by providing basic information to students, enables the counselor to spend more time with students in individual and group activities.
- 2. Get away from school look. The center should be an interesting, warm and comfortable room to promote student participation.

⁷³ Ibid., p. 602.

- 3. Provided needed materials and equipment. The equipment and materials in the center should be organized for easy access by the students.
- Establish an adequate budget to supplement and resupply the necessary materials. In order to be effective, materials must be constantly updated.⁷⁴

Of the studies done on Career Centers in secondary schools, the most extensive evaluation was carried out by Ellis and his associates on 182 career centers throughout the State of California. The four major objectives of the study were to (1) describe the current state of the art in California Career Centers; (2) determine from the student's point of view the effectiveness of Career Center materials, equipment and programs; (3) determine the effectiveness of Career Centers on students who use them; and (4) synthesize the findings of the study and make recommendations.⁷⁵ Although all of the objectives were accomplished and recommendations were submitted, only the findings of the second and third objectives pertain to this study and consequently will be cited.

The results of the second objective, the materials and programs the students found most helpful, revealed that all the materials and equipment were rated highly by the students. However, only 33% of the students utilized the equipment, while 55% of the students utilized the printed sources of information. The data also revealed that the

⁷⁴ Ibid., pp. 603-604.

⁷⁵ Stephen H. Ellis and others, <u>A Study of Career Resource</u> <u>Centers in the State of California</u> (Sacramento: Research Coordinating Unit, California State Department of Education, 1975), p. 3.

"exploratory work experience programs" received the highest effectiveness rating and speakers programs reached the largest number of students. Additional findings revealed that many Career Center personnel, career counselors in particular, devoted much of their time to tasks that underutilized their skills.

The results of the third objective, the effect of the Career Centers on students, revealed that the students who frequently attended the Career Centers, showed an increase in career exploration activities, a small but significant increase in career planning activities, but no increase in decision-making skills.⁷⁶

These findings suggests that Career Centers are a viable method of delivery career information and activities, but an improvement of services is needed in several areas.

Summary

As this review of literature has indicated the concepts of Career Education, Career Development, and Career Maturity are neither recent nor revolutionary concepts. Their emergence can be traced to the early 1950s, when guidance and vocational leaders began to theorize about the need to make the learning experiences of students more relevant to their future life roles.

Career education, as stated by Marland (1972), should help every student find and prepare for a rewarding occupation, whether he

⁷⁶ Ibid., pp. 110-111.

leaves high school without a diploma or graduates from college.⁷⁷ Though practical in its approach, career education does not track students into certain career fields, but rather according to Goldhammer, it does the opposite. As he views it,

the great strength of Career Education lies in the degree in which the future is open-ended for each student. Every effort should be made to help each student realistically determine how he can maximize his potentialities to achieve the highest career level consistent with his aspirations. Career Education has the objective of helping him make his own decisions of how he fits in. Hopefully, through this new educational plan, the past rhetoric of democratic educational opportunities can be made into realities of the educational system.⁷⁸

Most of the theories of career development assume the existence of both internal and external traits. Internal factors (aptitudes, interests, intelligence, needs, and level of desired achievement) appear to have a very definite relationship to vocational development. The external factors (socioeconomic status, parents and the environment) also seem to exert a great deal of influence upon an individual's career development.

Each of these factors in turn have served as a basis for various theories designed to interpret career development. However, none of the constructs are totally separate entities, capable of adequately explaining career development. It is when these constructs

⁷⁷Sidney P. Marland, "The School's Role in Career Development," <u>Educational Leadership</u> 30 (December 1972): 205.

⁷⁸ Keith Goldhammer and Robert E. Taylor, <u>Career Education</u>: <u>Perspective and Promise</u> (Columbus: Charles E. Merrill Publishing Co., 1972), p. 292.

are used in combination that the theories of career development are best understood.

The concept of vocational development has many important implications for career education. Career decisions are not only made while an individual is attending high school, but also throughout life. In school, the individual must decide among different curricula, such as college preparatory, vocational, or general. The decisions made during this period influence the individual's subsequent life roles.

Super (1960) stated that young people should be prepared to make vocational decisions as they progress through school that will insure appropriate career choices conducive to their personal satisfaction and to their success as preoductive members of society.⁷⁹ To attain this goal, more research is needed on the career development process and the activities that enhance career maturity.

Although much has been published on the delivery of career information and the career development of students, very little has been written on Career Centers as an educational tool for facilitating the career development of students. The present study is an effort to investigate this phenomenon.

⁷⁹ Super and Overstreet, pp. 150-158.

CHAPTER III

DESIGN OF THE STUDY

Introduction

The purpose of this investigation was to examine the relationship between student voluntary participation in Career Center functions and their level of career maturity as measured by the Attitude Scale and Competence Test of Career Maturity Inventory. The particular focus was on the CMI scores of students that (1) had not voluntarily visited the Career Center; (2) had voluntarily visited the center one to two times; and (3) had voluntarily visited the career center three or more times. In addition, the investigation attempted to determine if any relationship existed between the CMI scores of these participant groups with regard to sex, grade level, and the student's program of studies (academic, vocational, general). The statistical technique used to analyze the data was analysis of variance.

Sample Selection

The population for the study consisted of tenth, eleventh, and twelfth grade students in five high schools in the State of Michigan that housed a Career Center. These schools were identified by the Office of Career Education of the Michigan Department of Education.

The participating schools were all located in an suburban geographical area, offered similar educational programs and served a cross-section of socioeconomic and ethnic populations. Appendix A lists the schools that participated in the study.

After securing the approval of each building principal and the personnel associated with the operation of each Career Center, a sample size that consisted approximately of 10-15% of the total population of each grade level was obtained from the most recent enrollment list of each school. The subjects were randomly selected. Each participant's program of studies was then obtained from their permanent record file.

The selected students were then sent a letter (Appendix B) inviting them to participate in the study. The letter included the date, time, and location of the testing session. A second letter (Appendix C), announcing the time, date, and location of a second testing session, was sent to the students that were absent from the initial session. Participation by the students was voluntary.

Thus, after having each student indicate the number of times they voluntarily visited the Career Center (Question 12, Student Information Questionnaire) there were three attendance groupings, three types of program of studies, three grade levels and two sexes.

Instrumentation

The Career Center Questionnaire (Appendix D), designed to gather general information about the five participating career centers, was a modified version of a questionnaire utilized by Ellis and others in their study of 182 career centers in the State of California.¹ It was 13 pages in length and contained questions about all aspects of the career center facilities, staffing, operations, financing, and problems encountered in the establishment of the center. This questionnaire was completed by the director of each career center.

The Student Information Questionnaire (Appendix F) was developed to obtain background information about the students and the students' utilization and opinion of the effectiveness of the materials, equipment, and staffing of the Career Center. It contained 26 questions, the last one being an open-ended question designed to solicit student opinion for the improvement of the Career Center. The questionnaire was pilot tested at a local secondary school to determine readability and clarity. Directions for completing the questionnaire were re-written based upon the reactions and suggestions of the students and professional research experts.

The Career Maturity Inventory was selected as the most objective instrument to measure career maturity. In the foreword to the <u>Career Maturity Inventory Administration and Use Manual</u>, Crites reported that the Career Maturity Inventory formerly was entitled the Vocational Development Inventory. The change in name was made for several reasons. First, it reflects the current emphasis on career education that is a parallel process to career development. The interface between the two is a common focus upon youth's emerging readiness

¹Stephen A. Ellis and others, <u>A Study of Career Resource</u> <u>Centers in the State of California</u> (Sacremento: Research Coordinating Unit, California State Department of Education, 1975), pp. 122-135.

and competence to enter and compete in the world of work. Second, "career" does not have some specialized meanings that are associated with "vocational"; it symbolizes a new point of departure and value system in preparing everyone to lead a meaningful and productive life. Third, "maturity" captures and conveys the concept of progressive change which underlies emerging career awareness, exploration and decision making, the variables which the Career Maturity Inventory has been constructed to measure. Thus, the Career Maturity Inventory has been conceived and constructed to measure the maturity of attitudes and competencies that are critical in realistic decision making. In the past, it was assumed that an individual's vocation was largely a matter of chance and that there were few, if any, decisions leading up to this choice. However, this view of career choice has been challenged and proven erroneous. It is now postulated that the selection of an occupation is a process that begins in late childhood and continues into adulthood. Crites has analyzed this process and views it as unfolding along several distinct but interrelated dimensions, which include: (1) consistency of career choice over time, (2) realism of career choice in relation to personal capabilities and employment opportunities, (3) career choice attitudes, and (4) career choice competencies. The Career Maturity Inventory was designed to measure the latter two dimensions.

The Attitude Scale elicits the feelings, the subjective reactions and the dispositions that the individual has toward making a career choice and entering the world of work. The five attitudinal

clusters surveyed are: (1) involvement in the career choice process,
(2) orientation toward work, (3) independence in decision making,
(4) preference for career choice factors, and (5) conceptions of the career choice process.

The Competence Test measures the more cognitive variables involved in choosing an occupation. These include: how well the individual can appraise his/her job-related capabilities; how much he/she knows about the world of work; how adept he/she is in matching personal characteristics with occupational requirements; how foresightful he/she is in planning for a career; and how effectively he/she can cope with the problems which arise in the course of career development.

Crites (1973b) asserted that the Career Maturity Inventory is a reliable and valid assessment instrument that can be utilized in several settings. The reliability and validity of the Attitude Scale has been supported by accumulated research.² The Competence Test, a more recent aspect of the CMI, is currently being validated through research. The findings indicate that all five parts of the Competence Test are relatively homogenous sets of items and it is assumed that within a subtest the items measure the same variable.³

Taken together, the Attitude Scale and Competence Test provide both an extensive and intensive inventory of the critical behaviors in mature career decision-making and career development.

²John O. Crites, <u>Career Maturity Inventory: Theory and Research</u> <u>Handbook</u> Monterey, Calif.: CTB/McGraw-Hill, Inc., 1973), pp. 11-21.

³Ibid., pp. 23-35.

Data Collection

The administration of the instruments, the Student Information Questionnaire and the Career Maturity Inventory, was completed in one session. However, because of absenteeism a make-up session was necessary in four of the participating schools. The information for each questionnaire was entered on two respective answer sheets in response to the directions read by the researcher. The testing session was conducted in each school during the morning immediately after the homeroom period. The directors of the career centers and members of the local school counseling staff coordinated the scheduling of the testing sessions in their respective schools. Appendix G lists the cooperating personnel from each school system.

Statistical Procedure

The major dimensions of this study were the level of voluntary participation in Career Center activities and career maturity. Career maturity was represented by students' total scores on the CMI.

The statistical procedure was univariate analysis of variance (ANOVA). The four independent variables which served as a basis for grouping students were: (1) number of voluntary visits to the Career Center, (2) program of studies, (3) sex, and (4) grade level.

Two 4-way analysis of variance procedures were conducted. In the first case, student CMI Attitude Scale score was regarded as the dependent variable. In the second case, student CMI Competence Test

scores were regarded as the dependent variable. The Finn program was chosen to test all hypotheses because of the program's ability to deal with unequal cell sizes.⁴

⁴Jeremy D. Finn, <u>Multivariance: Univariate and Multivariate</u> <u>Analysis of Variance, Covariance, and Regression</u> (Ann Arbor: Michigan National Educational Resources, Inc., 1972).

CHAPTER IV

ANALYSIS OF DATA

Introduction

This study was designed to examine the relationship of career maturity of students as measured by the CMI and the level of participation in Career Center activities. The sample consisted of 578 students in grades ten, eleven, and twelve, from five high schools in Michigan that had implemented Career Centers within the past two years.

The data about students were obtained from the Student Information Questionnaire. In response to the question, "How well do you feel you can define your career plans?" a higher percentage of the students in the low (66.4%) and high (74.2%) participant groups indicated that they had a "good idea of the general area" or were "pretty sure" of their career plans than in the non-participant group (56.7%). Whereas, the percentage of students disclosing that they "haven't decided at all" or had a "vague idea" of their career plans was greater for the nonparticipant group (45.3%) than for the low (33.6%) and high (25.2%) participant groups (Table 4.1).

In response to the question, "How many of your teachers have discussed the importance of their subject matter to possible careers?" a higher percentage of the respondents in the high (64.4%) and low

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		Level of Voluntary Participation						
			Non		Low		High	
	Responses	N	%	N	%	N	%	
1.	Haven't decided at all	33	14.7	16	7.5	5	3.5	
2.	Vague idea	64	28.6	55	26.1	31	21.7	
3.	Good idea of general area	70	31.3	67	31.8	45	31.5	
4.	Pretty sure	57	25.4	73	34.6	61	42 .7	
	Mean	2.	67	2.	93	3.	15	
	S.D.	1.	01	0.	954	0.	891	

Responses of the Participant Groups on Their Ability to Define Career Plans

(51.1%) participant groups reported that two or more teachers had discussed the relationship of their subject matter to possible careers than the non-participant group (48.7%). Whereas, the percentage of students who indicated that "none" or "one teacher" related their subject matter to possible careers was greater for the non-participant group (51.3%) than for the low (47.9%) and high (35.7%) participant groups (Table 4.2).

In response to the question, "In how many of your courses have you participated in career-related activities?" a higher percentage of the respondents in the high (43.4%) and low (31.3%) participant groups indicated that they had participated in career-related activities in

Tabl	le 4	1.2
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		level of Voluntary Participation						
		N	Non Low			H	High	
	Responses	N	%	N	%	N	%	
1.	None	57	25.4	36	17.1	24	16.8	
2.	One teacher	58	25.9	65	30.8	27	18 .9	
3.	Two teachers	53	23.7	58	27.5	44	30.8	
4.	Three teachers	28	12.5	27	12.8	28	19.6	
5.	Four or more teachers	28	12.5	25	11.8	20	14.0	
	Mean	2.	61	2.	72	2.	95	
	S.D.	1.	32	1.	.23	1.	.27	

Responses of the Participant Groups to the Number of Teachers That Related Subject Matter to Careers

two or more courses than the non-participant group (29.1%). Whereas, the percentage of the students that indicated that they "participated" in career-related activities in one course or less was greater for the non-participant group (70.9%) than for the low (68.5%) and high (56.7%) participant groups (Table 4.3).

The responses of the students that had voluntarily visited the Career Center revealed that the assistance given by the staff was widely utilized and very helpful. In response to the question, "While in the Career Center, how often have you been assisted by the Career Center staff?" the majority of the students in both the low (61.6%) and

		1	Level of Voluntary Participation							
			Non		Low		High			
	Responses	N	%	N	%	N	%			
1.	None	82	36.8	61	29.0	34	23.8			
2.	One Course	76	34.1	83	39.5	47	32 .9			
3.	Two courses	50	22.4	40	19.0	32	22.4			
4.	Three courses	9	4.0	19	9.0	21	14.7			
5.	Four or more courses	6	2.7	7	3.3	9	6.3			
	Mean	2.	02	2.	18	2.	47			
	S.D.	0.	999	1.	.06	11.	.19			

Responses of the Participant Groups to the Number of Courses that Had Career-Related Activities

high (65.5%) participant groups indicated that the staff assisted them "sometimes" or "often." Whereas, only 20.9% of the low participant group and 12.6% of the high participant group disclosed that the staff had assisted them "almost never" or "not at all" (Table 4.4).

In response to the question "How would you rate the staff in the Career Center?" the majority of the students in both the low (87.3%) and high (90.2%) participant groups rated the staff either "helpful" or "extremely helpful." The percentage of the students that rated the staff as "so-so" or "not much help" was 11.7% of the low and 9.1% of the high participant group (Table 4.5).

Tabl	le	4.	4
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	·····		Level of Voluntary Participation					
			Low		High			
	Response	N	%	N	%			
1.	Not at all	26	12.6	7	4.9			
2.	Almost never	17	8.3	11	7 .7			
3.	Sometimes	66	32.0	50	35.2			
4.	Often	61	29.6	43	30 .3			
5.	Very frequently	36	17.5	31	21.8			
	Mean		3.31		3.5			
	S.D.		1.22		1.07			

Responses of Low and High Participant Groups to the Assistance Given by the Career Center Staff

In order to determine the usefulness of Career Center materials and equipment, the responses of the students who visited the center on the usefulness of materials and equipment were based on a Likert-type scale ranging from 1 (very useful) to 5 (not used at all). As shown in Table 4.6 the use of equipment and material increased with increased visits to the Career Center. However, the responses do not vary significantly according to the number of visits. In addition, interest surveys and other inventories were perceived as less useful by both the low and high participant groups . Responses of these five questions

lable 4.

			Level of Voluntary Participation					
			Low	T	High			
	Response	N	%	N	%			
1.	Extremely helpful	63	30.7	65	45.8			
2.	Helpful	116	56.6	63	44.4			
3.	So-so	21	10.2	8	5.6			
4.	Not much help	3	1.5	5	3.5			
5.	No staff	2	1.0	1	0.7			
	Mean		1.85		1.69			
	S.D.		0.733		0.792			
	Sum of Sqs.	10	109.61		8.37			

Responses of Low and High Participant Groups to the Helpfulness of the Career Center Staff

suggest that Career Centers are successfully dispensing career infomation to students but there is a need for a more thorough examination of the effectiveness of interest surveys and inventories on student career planning and development.

To obtain information on the usefulness of various resources that were useful in making a career choice, responses to various items were solicited (Table 4.7). Students who visited the Career Center rated work experience, speakers and field trips as more useful than

Table	4.6
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Mean Rating of the Responses of the Low and High Participant Groups to the Usefulness of Career Center Materials and Equipment

		Level of Voluntary Participation		
Question		Low	High	
Pamphlets, magazines, or	M	2.05	1.73	
books about careers (Q 17)	SD	1.19	0.81	
College, community college or	M	2.17	1.80	
trade school catalogs (Q 18)	SD	1.40	1.15	
Loose files containing career	M	2.36	2.23	
information (Q 19)	SD	1.31	1.21	
Student interest surveys and other inventories (Q 20)	M SD	2.80 1.39	2.73	
Audio-visual equipment	M	2.20	1.93	
(Q 21)	SD	1.48		

Table 4.7

		Level of Voluntary Participation			
Question		Non	Low	High	
Work experience	M	2.26	2.07	2.05	
(Q 22)	SD	1.35	1.30	1.21	
Speakers (Q 23)	M	2.83	2.70	2.44	
	SD	1.35	1.40	1.27	
Field trips (Q 24)	M	2.77	2.84	2.85	
	SD	1.53	1.44	1.57	
Parents, relatives, friends, etc. (Q 25)	M SD	1.97 1.07	2.11 1.12	2.04 1.08	

Mean Ratings of the Participant Groups to the Usefulness of Various Resources in Making a Career Choice

the students who had not visited the center. Whereas, the nonparticipatory students rated "parents, relatives, friends, etc." as more useful than students in both the low and high participatory group. Responses to these questions suggest that students who do not participate in Career Center activities rely more on their experiences with family and social contacts in making a career choice.

In response to question 26 concerning suggestions as to how the Career Center could better serve the students, there was no discernible trend among the responses. However, the most frequent sugtestions were the need for more operating hours during the school day and the need for additional personnel to assist the students. The responses to the Career Center Questionnaire indicated that each of the centers was basically created for the purpose of centralizing career education materials and services. In turn, the Career Centers have become a clearinghouse for assisting faculty members in developing career related instructional materials and providing students with a wide variety of career information. Further, there was little difference between the services and materials offered by each of the centers. This was due to the sharing of ideas and practices between the various centers.

All of the Career Centers have been in operation for approximately $1\frac{1}{2}$ to 2 years and were physically located near the Guidance and Counseling Offices. Each center was easily accessible to the general student population. Among the activities that were common to the five Career Centers were:

- Counseling;
- Assisting students in locating information;
- Administering Interest Surveys;
- Interpreting Interest Surveys;
- Conducting student orientations;
- Maintaining bulletin boards;
- Updating student files;
- Keeping career information current;
- Attracting students to the center;
- Conducting inservice training programs for counselors and teachers;
- Providing resource assistance to teachers and counselors;

• Contacting and coordinating business community activities; and

• Working with vocational coordinators.

In addition, two of the centers performed job placement tasks.

A variety of methods were utilized to attract students to the Career Center. As illustrated in Table 4.8, group orientations, career newsletters, and the distribution of test scores and applications were considered very important in attracting students.

Among the most important Career Center functions (Table 4.9) were the dispensing of career information, teaching of decision-making skills, and providing students with counseling and test and survey interpretation services.

Although the programs and activities offered by the centers were very similar, there were variations in their staffing patterns, operating budgets, and evaluation procedures.

The staffing patterns of the Career Center were somewhat varied. Each of the centers had a Director. Three centers had a full-time paraprofessional assistant. Of the two remaining centers, one employed a paraprofessional on a part-time basis, while the other utilized counselors on a rotating basis.

The variation in the operating costs among the centers was due primarily to different administrative budgeting. The budgets range from a high of \$7,000 to a low of \$1,000. The need for additional personnel and materials were cited as the items necessary for improvement of services.

Tab**le 4.8**

Mean Responses of the Career Centers on the Methods Utilized to Attract Students

Method	Mean	S.D.
Teacher referrals	1.40	0.55
Publications in the school bulletin	1.60	0.89
Class visits by Career Center personnel	2.00	1.00
Career days of fairs	2.00 ^a	0.82
Referrals from other students	1.20	0.45
Use of center to distribute test scores, applications, etc.	1.00	0
Group orientations to the Career Center	1.00	0
Career newsletter	1.00 ^a	1.50

^aBased on the responses from four Career Centers.

Because all of the centers are still in the early developmental stages, no formalized evaluation programs have been implemented. However, two of the centers had conducted student surveys and were actively developing additional instruments and methods of measurement to provide feedback on the various programs and services offered. A description of the functions and facilities of the participating Career Centers are shown in Appendix D.

Table 4.9

Function	Mean	S.D.
To provide a wide range of career information	1.00	0
To teach decision-making skills	1.00	0
To give each student the opportunity to acquire a marketable skill	2.80	1.64
To provide counseling and test and survey interpretation	1.00	0
To provide the student with work experience	2.80	1.64

Mean Responses of the Career Centers on the Importance of Career Center Functions

Career maturity of the students was measured by Crites' Career Maturity Inventory. This instrument consisted of an Attitude Scale and a Competence Test, yielding a separate score for each of these two sections. The Student Information Questionnaire was utilized to determine the student's participation, sex, and grade level. Each participant's program of studies was obtained from his permanent record file.

Four sets of hypotheses were formulated in order to test whether significant relationships existed between student voluntary participation in Career Center activities and their scores on the Career Maturity Inventory. The students' level of voluntary participation, program of studies, sex, and grade level were regarded as the independent variables. All hypotheses were tested twice with four-way analysis of variance, first with the dependent variable being the Attitude Scale of the CMI, and then with the dependent variable being the Competence Test of the CMI. All means of the two independent variables are presented in Table 4.10. An alpha level of .01 was set for testing each of the 12 individual hypotheses.

Presentation of Data

The study produced a number of significant findings. The subsidiary questions (in italics) and results of the related hypotheses are listed below.

1. Are there significant differences between the CMI scores of students in non, low, and high participant groups?

Hypothesis la:

There are no significant differences between the mean CMI scores of non-participating students and the mean CMI scores of low and high participating students.

Hypothesis la was tested by comparing the differences between the mean CMI scores of non-participating students and the mean CMI scores of low and high participating students. Analysis of variance results are shown in Table 4.11 and indicate that students in low and high participant groups scored significantly higher on both the Attitude Scale and Competence Test of the Career Maturity Inventory than students in the non-participant group. Therefore, the null hypothesis was rejected.

Table 4.10

Summary of Mean Scores on the Attitude Scale and Competence Test of the Career Maturity Inventory

INDEPENDENT VARIABLES				DEPENDENT VARIABLES		
Level of				[Mean CMI	Scores
Student's Voluntary Participation	Program of Studies	Sex	Grade Level	N	Attitude Scale	Competence Test
	College	Male	10 11 12	13 10 8	37.15 35.00 39.00	74.38 64.30 70.00
	Preparatory	Female	10 11 12	16 7 14	37.00 35.86 39.14	69.88 70.43 77.43
Non-	Neuroland	Male	10 11 12	9 12 15	32.78 30.67 35.00	46.33 44.66 55.47
Participation	VOCATIONAI	Female	10 11 12	12 19 6	31.83 36.53 30.00	52.67 68.32 58.50
	General	Male	10 11 12	16 13 10	36.06 34.85 37.80	62.38 60.38 62.50
	General	Female	10 11 12	22 14 8	33.59 34.00 35.88	54.73 64.64 65.25
	College Preparatory	Male	10 11 12	9 5 12	35.78 32.60 38.33	64.56 73.80 71.50
		Female	10 11 12	18 11 12	36.50 40.18 39.25	71.00 75.36 78.00
Low	Vocational	Male	10 11 12	974	33.33 34.57 35.00	50.00 65.14 50.75
Participation		Female	10 11 12	8 10 11	35.88 34.60 40.82	51.88 61.90 73.09
	General	Male	10 11 12	19 14 11	35.63 34.57 35.63	62.53 61.93 65.27
		Female	10 11 12	19 17 15	35.11 35.18 35.73	60.16 68.47 65.40
	College Preparatory	Male	10 11 12	7	35.71 37.55 39.00	69.29 70.45 76.40
		Female	10 11 12	9 18 12	37.00 37.39 39.00	75.44 78.06 76.67
High		Male	10 11 12	6 9 3	35.83 35.67 34.67	53.00 51.67 64.00
Participation	Vocational	Female	10	3511	39.00 37.80 37.36	71.67 71.80 61.27
		Male	10	12	34.25	61.00 68.00 47.00
	General	Female	10	10	37.9	0 66.3 0 72.4 3 70.3

	Probability	.0030**	. 0005**	۱۲۲۱.	
dl bn	LL.	8.901	12.656	1.827	3.315
hesis la a	Degrees of Freedom	-	 	_	. –
ce for Testing Hypot	Source of Variation	Al vs. <u>A2 + A3</u> (CMI Attitude score)		A2 vs. A3 (CMI Attitude score)	A2 vs. A3 A2 vs. A3 (CMI Competence score
Results of Analysis of Varian	Hypothesis	la. There is no significant difference between the mean CMI Attitude Scale scores of non-participating students and the mean CMI Attitude Scale scores of low and high participating students.	There is no significant difference between the mean CMI Competence Test scores of non-participating students and the mean CMI Competence Test scores of low and high participating students.	<pre>lb. There is no significant difference between the mean CMI Attitude Scale scores of low participating students and the mean CMI Attitude Scale scores of high participating students.</pre>	There is no significant difference between the mean CMI Competence Test scores of low participating students and the mean CMI Competence Test scores of high participating students.

Table 4.11

**Significant at the .01 level.

Hypothesis lb:

There is no significant difference between the mean CMI scores of low participating students and the mean CMI scores of high participating students.

Hypothesis 1b was tested by comparing the differences between the mean CMI scores of low participating students and the mean CMI scores of high participating students. Analysis of variance results are shown in Table 4.11 and indicate that both the Attitude Scale and Competence Test scores of the low participating students were not significantly different from the scores of the high participating students. Consequently, the null hypothesis was not rejected.

2. Are there significant differences between the CMI scores of students enrolled in college preparatory, vocational, and general programs?

Hypothesis 2a:

There are no significant differences between the mean CMI scores of students enrolled in a college preparatory program and students enrolled in a general program.

Hypothesis 2a was tested by comparing the difference between the mean CMI scores of students enrolled in the college preparatory program and students enrolled in a general program. Analysis of variance results are shown in Table 4.12 and indicate that students enrolled in a college preparatory program scored significantly higher on both the Attitude Scale and the Competence Test of the Career Maturity Inventory than students enrolled in the general program. Thus, the null hypothesis was rejected.

	Hypothesis	Source of Variation	Degrees of Freedom	F	Probability
2 a .	There is no significant difference between the mean CMI Attitude Scale scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 (CMI Attitude score)	1	27.111	.001**
	There is no significant difference between the mean CMI Competence Test scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 (CMI Competence score)	1	80.457	.001**
2Ъ.	For non-participant groups, there is no significant difference between the mean CMI Attitude Scale scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 for Al (CMI Attitude score)	١	18.912	.0001**
	For non-participant groups, there is no significant difference between the mean CMI Competence Test scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 for Al (CMI Competence score)	۱	39.683	.001**
	For low participant groups, there is no significant difference between the mean CMI Attitude Scale scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 for A2 (CMI Attitude score)	۱	7.583	.0067**
	For low participant groups, there is no significant difference between the mean CMI Competence Test scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 for A2 (CMI Competence score)	۱	20.092	.001**
	For high participant groups there is no significant difference between the mean CMI Attitude Scale scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 for A3 (CMI Attitude score)	1	5.812	.0163
	For high participant groups there is no significant difference between the mean CMI Competence Test scores of students enrolled in a college preparatory program and students enrolled in a general program.	Bl vs. B3 for A3 (CMI Competence score)	1	30.211	.0001**

Table	4.	12
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Results of Analysis of Variance for Testing Hypotheses 2a, 2b, 2c, and 2d

	Hypothesis	Source of Variation	Degrees of Freedom	F	Probability
2c.	There are no significant differences between the mean CMI Attitude Scale scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 (CMI Attitude score)	١	.1997	.6552
	There are no significant differences between the mean CMI Competence Test scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 (CMI Competence score)	1	9.266	.0025**
2d.	For non-participant groups, there is no significant difference between the mean CMI Attitude Scale scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 for A1 (CMI Attitude score)	1	3.652	.0566
	For non-participant groups there is no significant difference between the mean CMI Competence Test scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 for A1 (CMI Competence score)	۱	3.916	.0484
	For low participant groups there is no significant difference between the mean CMI Attitude Scale scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 for A2 (CMI Attitude score)	1	.4131	.5207
	For low participant groups, there is no significant difference between the mean CMI Competence Test scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 for A2 (CMI Competence score)	1	2.295	.1304
	For high participant groups there is no significant difference between the mean CMI Attitude Scale scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 for A3 (CMI Attitude score)	۱	.7466	.3880
	For high participant groups there is no significant difference between the mean CMI Competence Test scores of students enrolled in a vocational program and students enrolled in a general program.	B2 vs. B3 for A3 (CMI Competence score)	١	2.790	.0955

Table 4.12--Continued

******Significant at the .01 level.

Hypothesis 2b:

For non, low, and high participant groups, there is no significant difference between the mean CMI scores of students enrolled in a college preparatory program and students enrolled in a general program.

Hypothesis 2b was tested by comparing the differences between the mean CMI scores of students enrolled in the college preparatory program and the mean CMI scores of students enrolled in the general program for each of the participant groups. Analysis of variance results are shown in Table 4.12 and indicate that for both the non and low participant groups, students enrolled in a college preparatory program scored significantly higher on both the Attitude Scale and the Competence Test of the Career Maturity Inventory than students enrolled in the general program. However, for the high participant group, students enrolled in a college preparatory program scored significantly higher on the Competence Test but did not score significantly different on the Attitude Scale than students enrolled in a general program. Consequently, the null hypothesis was rejected for the non and low participant groups, but was not totally rejected for the high participant group.

Hypothesis 2c:

There is no significant difference between the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program.

Hypothesis 2c was tested by comparing the difference between the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program. Analysis of variance results are shown in Table 4.12 and indicate that students enrolled in a

vocational program scored significantly higher on the Competence Test but did not score significantly different on the Attitude Scale than students enrolled in a general program. Consequently, the null hypothesis was rejected for the Competence Test but was not rejected for the Attitude Scale.

Hypothesis 2d:

For non, low, and high participant groups, there is no significant difference between the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program.

Hypothesis 2d was tested by comparing the difference between the mean CMI scores of students enrolled in the college preparatory program and the mean CMI scores of students enrolled in the general program for each of the participant groups. Analysis of variance results are shown in Table 4.12 and indicate that the non, low, and high participant groups, both the Attitude Scale and Competence Test scores of students enrolled in a vocational program were not significantly different from the scores of students enrolled in a general program. Consequently, the null hypothesis was not rejected.

3. Are there significant differences between the CMI scores of males and females.

Hypothesis 3a:

There are no significant differences between the mean CMI scores of males and females.

Hypothesis 3a was tested by comparing the difference between the mean CMI scores of males and females that participated in the study. Analysis of variance results are shown in Table 4.13 and indicate that females scored significantly higher on the Competence

Tabl	e 4	•	13
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Results of Analysis of Variance for Testing Hypotheses 3a and 3b

	Hypothesis	Source of Variatior	Degrees of Freedom	F	Probability
3a.	There is no significant difference between the mean CMI Attitude Scale scores of males and females	Cl vs. C2 (CMI Attitude s	core) 1	3.101	.0789
	There is no significant difference between the mean CMI Competence Test scores of males and females.	Cl vs. C2 (CMI Competence	score) 1	14.305	.0002**
ЗЬ.	For non-participant groups, there is no significant difference between the mean CMI Attitude Scale scores of males and females.	Cl vs. C2 for (CMI Attitude s	Al l score)	.2045	.6513
	For non-participant groups, there is no significant difference between the mean CMI Competence Test scores of males and females.	Cl vs. C2 for (CMI Competence	· Al l e score)	3.796	.0520
	For low participant groups there is no significant difference between the mean CMI Attitude Scale scores of males and females.	Cl vs. C2 for (CMI Attitude s	r A2 1 score) 1	4.449	.0355
	For low participant groups, there is no significant difference between the mean CMI Competence Test scores of males and females.	Cl vs. C2 for (CMI Competence	r A2 1 e score) 1	4.058	.0445
	For high participant groups, there is no significant difference between the mean CMI Attitude Scale scores of males and females.	Cl vs. C2 for (CMI Attitude :	r A3 1 score)	2.435	.1193
	For high participant groups, there is no significant difference between the mean CMI Competence Test scores of males and females.	Cl vs. C2 fo (CMI Competenc	r A3 1 e score)	7,751	.0056**

******Significant at the .01 level.

Test but did not score significantly different on the Attitude Scale than males. Consequently, the null hypothesis was rejected for the Attitude Scale but was not rejected for the Competence Test.

Hypothesis 3b:

For each of the three participant groups, there is no significant difference between the mean CMI scores of males and females.

Hypothesis 3b was tested by comparing the difference between the mean CMI scores of males and females in each of the participant groups. Analysis of variance results are shown in Table 4.13 and indicate that for non and low participant groups, both the Attitude Scale and Competence Test scores of females were not significantly different from the scores of males. However, for the high participant group, females scored significantly higher on the Competence Test but did not score significantly different on the Attitude Scale than males. Consequently, the null hypothesis was not rejected for the non and low participant groups and produced conflicting results for the high participant group.

4. Are there significant differences between the CMI scores of tenth, eleventh, and twelfth grade students?

Hypothesis 4a:

There are no significant differences between the mean Career Maturity Inventory scores of tenth grade students and the mean Career Maturity Inventory scores of eleventh grade students.

Hypothesis 4a was tested by comparing the differences between the mean CMI scores of the tenth and eleventh grade students that participated in the study. Analysis of variance results are shown in Table 4.14 and indicate that eleventh grade students scored
Table	4	•	1	4
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Results of Analysis of Variance for Testing Hypotheses 4a, 4b, 4c, and 4d

	Hypothesis	Source of Variation	Degrees of Freedom	F	Probability
4a.	There is no significant difference between the mean CMI Attitude Scale scores of tenth grade students and the mean CMI Attitude Scale scores of eleventh grade students.	Dl vs. D2 (CMI Attitude score)	1	4.063	.0444
	There is no significant difference between the mean CMI Competence Test scores of tenth grade students and the mean CMI Competence Test scores of eleventh grade students.	D1 vs. D2 (CMI Competence score)	۱	14.303	.0002**
4b.	For non-participant groups, there is no significant difference between the mean CMI Attitude Scale scores of tenth grade students and the mean CMI Attitude Scale scores of eleventh grade students.	Dl vs. D2 for Al (CMI Attitude score)	1	2.537	.1119
	For non-participant groups, there is no significant difference between the mean CMI Competence Test scores of tenth grade students and the mean CMI Competence Test scores of eleventh grade students.	Dl vs. D2 for Al (CMI Competence score)	۱	5.597	.0184
	For low participant groups, there is no significant difference between the mean CMI Attitude Scale scores of tenth grade students and the mean CMI Attitude Scale scores of eleventh grade students.	Dl vs. D2 for A2 (CMI Attitude score)	۱	2.306	.1295
	For low participant groups, there is no significant difference between the mean CMI Competence Test scores of tenth grade students and the mean CMI Competence Test scores of eleventh grade students.	Dl vs. D2 for A2 (CMI Competence score)	١	10.102	.002**
	For high participant groups, there is no significant difference between the mean CMI Attitude Scale scores of tenth grade students and the mean CMI Attitude Scale scores of eleventh grade students.	D] vs. D2 for A3 (CMI Attitude score)	١	.124	7.7242
	For high participant groups, there is no significant difference between the mean CMI Competence Test scores of tenth grade students and the mean CMI Competence Test scores of eleventh grade students.	D] vs. D2 for A3 (CMI Competence score)	۱	.88	57 .34 71

Table 4.14--Continued

		Source of	Degrees of		
	Hypothesis	Variation	Freedom	F	Probability
4c.	There is no significant difference between the mean CMI Attitude Scale scores of eleventh grade students and the mean CMI Attitude Scale scores of twelfth grade students.	D2 vs. D3 (CMI Attitude score)	1	9.162	.0026
	There is no significant difference between the mean CMI Competence Test scores of eleventh grade students and the mean CMI Competence Test scores of twelfth grade students.	D2 vs. D3 (CMI Competence score)	1	.4243	.5151
4d.	For non-participating groups, there is no significant difference between the mean CMI Attitude Scale scores of eleventh grade students and the mean CMI Attitude Scale scores of twelfth grade students.	D2 vs. D3 for Al (CMI Attitude score)	١	4.112	.0431
	For non-participant groups, there is no significant difference between the mean CMI Competence Test scores of eleventh grade students and the mean CMI Competence Test scores of twelfth grade students.	D2 vs. D3 for A1 (CMI Competence score)	۱	.5481	.4595
	For low participant groups, there is no significant difference between the mean CMI Attitude Scale scores of eleventh grade students and the mean CMI Attitude Scale scores of twelfth grade students.	D2 vs. D3 for A2 (CMI Attitude score)	I	4.957	.0265
	For low participant groups, there is no significant difference between the mean CMI Competence Test scores of eleventh grade students and the mean CMI Competence Test scores of twelfth grade students.	D2 vs. D3 for A2 (CMI Competence score)	۱	.1194	.7298
	For high participant groups, there is no significant difference between the mean CMI Attitude Scale scores of eleventh grade students and the mean CMI Attitude Scale scores of twelfth grade students.	D2 vs. D3 for A3 (CMI Attitude score)	۱	.1382	.7102
	For high participant groups, there is no significant difference between the mean CMI Competence Test scores of eleventh grade students and the mean CMI Competence Test scores of twelfth grade students.	D2 vs. D3 for A3 (CMI Competence score)	۱	.086	1.7694

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**Significant at the .01 level.

significantly higher on the Competence Test but did not score significantly different on the Attitude Scale than tenth grade students. Consequently, the null hypothesis was rejected for the Competence Test but was not rejected for the Attitude Scale.

Hypothesis 4b:

For each of the participant groups, there is no significant difference between the mean CMI scores of tenth grade students and the mean CMI scores of eleventh grade students.

Hypothesis 4b was tested by comparing the difference between the mean CMI scores of tenth grade students with the mean CMI scores of eleventh grade students for each of the participant groups. The results of this analysis are shown in Table 4.14 and indicate that for the non and high participant groups, both the Attitude Scale and Competence Test scores of tenth grade students were not significantly different from the scores of eleventh grade students. However, for the low participant group, eleventh grade students scored significantly higher on the Competence Test but did not score significantly different on the Attitude Scale than tenth grade students. Consequently, the null hypothesis was not rejected for the non and high participant groups and produced conflicting results for the low participant group.

Hypothesis 4c:

There is no significant difference between the mean CMI scores of eleventh grade students and the mean CMI scores of twelfth grade students.

Hypothesis 4c was tested by comparing the differences between the mean CMI scores of the eleventh and twelfth grade students that participated in the study. Analysis of variance results are shown in

Table 4.14 and indicate that both the Attitude Scale and Competence Test scores of eleventh grade students were not significantly different from the scores of twelfth grade students. Consequently, the null hypothesis was not rejected.

Hypothesis 4d:

For each of the participant groups, there is no significant difference between the mean CMI scores of eleventh grade students and the mean CMI scores of twelfth grade students.

Hypothesis 4d was tested by comparing the difference between the mean CMI scores of eleventh grade students with the mean CMI scores of twelfth grade students for each of the participant groups. Analysis of variance results are shown in Table 4.14 and indicate that for the non, low, and high participant groups, both the Attitude Scale and Competence Test scores of eleventh grade students were not significantly different from the scores of twelfth grade students. Consequently, the null hypothesis was not rejected.

Summary

In order to examine the effect of Career Centers on the enhancement of student career maturity, the CMI scores of 578 students in five high schools were examined and compared using four classification categories. The four classification categories were: (1) level of student voluntary participation in Career Center activities, (2) student's program of studies, (3) sex, and (4) grade level.

Twelve directional hypotheses were tested and the results were reported in the present chapter. An alpha level of .01 was set for

testing each of the 12 hypotheses. As a result of these tests, two hypotheses were rejected (la and 2a), four hypotheses were not rejected (lb, 2d, 4c, and 4d), and six hypotheses produced conflicting results (2b, 2c, 3a, 3b, 4a, and 4b). The results of hypotheses groups 2, 3, and 4 are more interesting because they both support and conflict with other findings regarding career education and career maturity. A fuller discussion of the findings is included in the following chapter.

CHAPTER V

SUMMARY AND CONCLUSIONS

The major problem of the present study was to determine whether voluntary participation in Career Center activities enhanced student career maturity.

Summary of the Study

The level of student career maturity was measured by the Career Maturity Inventory. It consisted of an Attitude Scale and a Competence Test. The Attitude Scale elicited the feelings, subjective reactions and the dispositions that an individual had toward making a career choice. The Competence Test measured the cognitive variables involved in the selection of an occupation.

The sample (N = 578) was drawn from a population of students in five high schools in Michigan that housed Career Centers. The participants consisted of tenth, eleventh, and twelfth grade students. The students' level of voluntary participation, program of studies, sex, and grade level were regarded as the independent variables. Four major questions, or 12 individual related hypotheses were formulated in order to test whether significant relationships existed between the four classification categories for each student and their level of career maturity as measured by the CMI. The hypotheses were tested

twice with four-way analysis of variance, first with the dependent variable being the Attitude Scale of the CMI, and then with the dependent variable being the Competence Test of the CMI. The statistical procedure utilized to interpret the data was univariate analysis of variance. An alpha level of .01 was set for testing each of the hypotheses. The following results were obtained:

1. Are there significant differences between the mean CMI scores of students in non, low, and high participant groups?

Hypothesis la:

There are significant differences between the mean CMI scores and non-participating students and the mean CMI scores of low and high participating students.

Hypothesis 1b:

There is no evidence of significant differences between the mean CMI scores of low participating students and the mean CMI scores of high participating students.

2. Are there significant differences between the mean CMI scores of students enrolled in college preparatory, vocational, and general programs?

Hypothesis 2a:

There are significant differences between the mean CMI scores of students enrolled in a college preparatory program and students enrolled in a general program.

Hypothesis 2b:

For the non and low participant groups, there is a significant difference between the mean CMI scores of students enrolled in a college preparatory program and students enrolled in a general program. For the high participant group, there is a significant difference between the mean Competence Test scores, but there is no evidence of a significant difference between the mean Attitude Scale scores of students enrolled in a college preparatory program and students enrolled in a general program.

Hypothesis 2c:

There is a significant difference between the mean Competence Test scores, but there is no evidence of a significant difference between the mean Attitude Scale scores of students enrolled in a vocational program and students enrolled in a general program.

Hypothesis 2d:

For non, low, and high participant groups, there is no evidence of a significant difference between the mean CMI scores of students enrolled in a vocational program and students enrolled in a general program.

3. Are there significant differences between the mean CMT scores of males and females?

Hypothesis 3a:

There is a significant difference between the mean Competence Test scores, but there is no evidence of a significant difference between the mean Attitude Scale scores of males and females.

Hypothesis 3b:

For the non and low participant groups, there is a significant difference between the mean CMI scores of males and females. For the high participant group, there is a significant difference between the mean Competence Test scores, but there is no evidence of a significant difference between the mean Attitude Scale scores of males and females.

4. Are there significant differences between the mean CMI scores of tenth, eleventh, and twelfth grade students?

Hypothesis 4a:

There is a significant difference between the mean Competence Test scores, but there is no evidence of a significant difference between the mean Attitude Scale scores of tenth and eleventh grade students.

Hypothesis 4b:

For the non and high participant groups, there is a significant difference between the mean CMI scores of tenth grade students and the mean CMI scores of eleventh grade students. For the low participant group, there is a significant difference between the mean Competence Test

scores, but there is no evidence of a significant difference between the mean Attitude Scale scores of tenth and eleventh grade students.

Hypothesis 4c:

There is no evidence of a significant difference between the mean CMI scores of eleventh grade students and the mean CMI scores of twelfth grade students.

Hypothesis 4d:

For the non, low, and high participant groups, there is no evidence of a significant difference between the mean CMI scores of eleventh grade students and the mean CMI scores of twelfth grade students.

Discussion of the Findings

The study produced a number of significant results. A discussion of the findings and recommendations for future research is presented below.

Question 1--Level of Participation

The first set of hypotheses (la and lb) postulated that the students' level of participation in Career Center activities would not cause a significant difference in their level of career maturity as measured by the CMI. Results indicated that the mean CMI scores of the non-participant group was significantly lower than the combined mean CMI scores of the low and high participant groups. Subsequently, the null hypothesis la, which predicted no significant difference between the mean CMI scores of non-participating students and the combined mean CMI scores of low and high participating students was rejected. This finding, along with the result of hypothesis lb, in which there was no evidence of a significant difference between the mean CMI scores of low and high participating students, suggests that the lower scores of the non-participating group may be attributed to their lower level of participation in Career Center activities. This finding was consistent with the finding by Ellis and others in their survey of career centers in the state of California. According to Ellis, there was a positive relationship between the number of times students visited a Career Center and their level of career exploration and planning.¹ In regards to this finding, the challenge that must be met by the schools is not only the establishment of a Career Center but also the development and implementation of programs that will encourage students to utilize the services of the Career Center.

Question 2--Program of Studies

The second set of hypotheses (2a, 2b, 2c, and 2d) postulated that student enrollment in a particular program of studies would not cause a significant difference in their level of career maturity as measured by the CMI. Results indicated that the mean CMI scores of students enrolled in a college preparatory were significantly higher than the mean CMI scores of students enrolled in a general program. However, while the students enrolled in a vocational program significantly higher on the Competence Test than students enrolled in a general program, there was no evidence of a significant difference between the scores of these two groups on the Attitude Scale. Thus,

¹Ellis and others, "A Study of Career Resource Centers," p. 89.

the null hypothesis 2a, relating to enrollment in a college preparatory program and a general program was rejected, whereas, the null hypothesis 2c, relating to enrollment in a vocational program and a general program was rejected for the Competence Test but not rejected for the Attitude Scale. These findings were consistent with the investigation of Gribbons and Lohnes, and Super and Overstreet.

Gribbons and Lohnes concluded that college-bound students, compared to business, industrial arts and general students, consistently demonstrated a higher readiness for vocational planning,² while Super and Overstreet also concluded that curriculum selection was related to vocational maturity.³ On the basis of the foregoing studies, significant differences of vocational maturity among students enrolled in the three major programs of study: college preparatory, vocational, and general, were expected. The findings of this investigation support the conclusions of the two aforementioned studies.

When the level of participation was considered along with enrollment in a particular program of studies, the only significant difference was at the high level of participation, where students enrolled in a college preparatory program scored significantly higher on the Competence Test than students enrolled in a general program. However, there was no evidence of a significant difference between the scores of these two groups on the Attitude Scale. Thus, the

²Gribbons and Lohnes, "Validation of Vocational Planning Interview Scales," pp. 23-24.

³Super and Overstreet, "The Vocational Maturity of Ninth Grade Boys," p. 60.

null hypothesis 2b, relating to level of participation and enrollment in a college preparatory program and in a general program was rejected for the high participant group on the Competence Test but not rejected for the Attitude Scale. The null hypothesis 2d, relating to level of participation and enrollment in a vocational program and in a general program, was not rejected.

Based on these findings it appears that while an increased level of participation seems to have a positive relationship with a higher score on the Competence Test, there is no evidence that participation had any relationship with the Attitude Scale. Perhaps the attitudes of students are predetermined and are the results of past experiences. Or, perhaps the instrument used was not refined enough to measure the attitude correlation. Not only is there a need for additional research to identify these factors, but also there is a need to determine if the activities provided by Career Centers have any effect upon the attitude of students towards their career development.

Question 3--Sex

The third set of hypotheses (3a and 3b) postulated that the sex of the students would not cause a significant difference in their CMI scores. Results indicated that while females scored significantly higher on the Competence Test than males, there was no evidence of a significant difference in the scores of these two groups on the Attitude Scale. Thus, the null hypothesis 3a, relating to the sex of the participants, was rejected for the Competence Test but not rejected for the Attitude Scale. This finding is consistent with the research by

Mintzer, in which he indicated that vocational maturity was a development process and that sex was a factor in that development.⁴

When the level of participation was considered along with the sex of the participants, the only significant difference was at the high level of participation, where females scored significantly higher on the Competence Test than males. However, there was no evidence of a significant difference between the scores of these two groups on the Attitude Scale. Thus, the null hypothesis 3b, relating to level of participation and sex, was rejected for the Competence Test but was not rejected for the Attitude Scale.

Based on these findings, it appears that while there seems to be a positive relationship between females and higher scores on the Competence Test, there does not appear to be any relationship between sex and score on the Attitude Scale. These findings indicate that in general females seem to possess a wider knowledge of careers and the factors involved in career planning than males. In part, this may be attributed to the recent emphasis and publicity being focused on the career development of females in our society. Overall, the mean CMI scores of males and females increased with a higher level of participation and at the same rate.

Question 4--Grade Level

The four sets of hypotheses (4a, 4b, 4c, and 4d) postulated that student grade level would not cause a significant difference in

"Mintzer, "Vocational Maturity and Its Relationship," p. 2643-A.

their level of career maturity as measured by the CMI. Results indicate that while eleventh grade students scored significantly higher on the Competence Test than tenth grade students, there was no evidence of a significant difference between the mean scores of these two groups on the Attitude Scale. Moreover, there was no significant difference between the mean CMI scores of eleventh and twelfth grade students on either the Attitude Scale or the Competence Test of the CMI. Thus, the null hypothesis 4a, relating to the mean CMI scores of eleventh and tenth grade students was rejected for the Competence Test but was not rejected for the Attitude Scale. The null hypothesis 2c, relating to the mean CMI scores of eleventh and twelfth grade students, was not rejected for either the Attitude Scale or the Competence Test of the CMI. These findings were consistent with the combined mean scores of the Attitude Scale and Competence Test from six states by Crites in the "Administration and Use Manual" for the Career Maturity Inventory.⁵ Crites indicated that as grade level increases, so also the mean CMI scores increase. His results also indicate that a smaller difference exists between the mean CMI scores of eleventh and twelfth grade students. The findings of this investigation support the conclusions of Crites' research.

When the level of participation was considered along with grade level, the only significant difference was at the low level of participation where students in the eleventh grade scored significantly higher on the Competence Test than students in the tenth grade. However, there

⁵Crites, "Administration and Use Manual," pp. 39-52.

was no evidence of a significant difference between the scores of these two on the Attitude Scale. For eleventh and twelfth grade students there was no evidence of a significant difference between the non, low, and high participant levels on both the Attitude Scale and the Competence Test of the CMI. Thus, the null hypothesis 2b relating to level of participation and tenth and elventh grade students was rejected for the low participant group on the Competence Test, but not rejected for the Attitude Scale. The null hypothesis 2d, relating to the level of participation and eleventh and twelfth grade students was not rejected.

Based on these findings it appears while a higher grade level seems to have a positive relationship with a higher score on the Competence Test, this relationship is not apparent for the Attitude Scale. It can therefore be concluded that the students' knowledge of careers and their ability to make career decisions, increases with their grade level. However, continual studies and evaluations on student career choices should be conducted on students both before and after the termination of their secondary careers.

Suggestions for the Operation of Career Centers

The information gained through the rational assessment of the data, readings, and personal observations has several implications for the implementation and operation of Career Centers. First, the difference in the mean CMI scores of non, low, and high participating students has implications for both the guidance program and the

curricular program of the school. The difference in the mean CMI scores of these groups, in which the low and high participating students attained higher scores on the CMI than the non-participating students, suggest the need for a program of intervention to encourage students to utilize the Career Center facilities. At the present time there appears to be few programs designed to accomplish this task. Thus, the schools and the state departments of education should officially recognize this need and implement programs to assist students in their career development.

Second, it is apparent from the data that the activities provided by the Career Center seem to have little relationship between the Attitude Scale scores of students on the Career Maturity Inventory. Although there is a need for research to identify additional factors, the activities provided by Career Centers should not be solely directed towards the enhancement of student attitudes. Instead, the activities of the Career Centers should also provide students with a wide variety of exploration experiences that encourage the practical application of their career planning skills.

Third, the administrative staff of the schools and state departments of education should establish a budget specifically for the operation and improvement of the Career Centers. The budget should include specific allocations for the continual purchase of current career-related materials and paraprofessional staffing. The assistance of a paraprofessional is essential for the effective and efficient delivery of career information to students and faculty. In addition,

the support of a paraprofessional relieves the Career Center Directors and counselors of tasks that underutilize their skills.

Finally, the need for Career Centers is apparent if schools adhere to the rationale espoused by many career educators that the providing of career development activities is necessary to enhance student career maturity. However, because Career Centers have only recently emerged as one viable means of delivering career information to students, there is a need to familiarize administrative and guidance personnel with the various functions and activities to insure effective student career development. The following statement by Herr stresses this need:

Guidance strategies related to decision-making and vocational development must be seen not just as an opportunity for the expression of certain personal characteristics which make up career development but rather as devoted to developing these characteristics. As Bysbers (1969) has observed, "Career exploration programs should not be seen as strictly a mining operation in which only those with certain talents are chosen, but as more of a farming approach in which all individuals are provided with opportunities to grow and to develop." Although this distinction may be subtle, it represents the difference between purposeful, sequential development and development by chance and happenstance.⁶

Recommendations for Further Research

The primary purpose of the present investigation was to inquire whether differences exist in the career maturity level of non, low, and high participating students in Career Center activities. The resultant data has provided some additions to our knowledge and understanding of

⁶Herr, "Decision-Making and Vocational Development," p. 54.

career maturity, but, as is often the case, it has also raised additional questions that should be thoroughly examined. In this context, the following areas are suggested for further research:

- 1. Studies should be undertaken to determine the effectiveness of various programs of study (college preparatory, vocational, general, etc.) on student career maturity. Students should be assessed both prior to and at the conclusion of the program.
- 2. Research should be conducted on the effects of specific career development activities on the career maturity of students.
- 3. Further research is needed on the effects of various Career Center staffing patterns, services offered, career information systems, and funding methods on student career maturity.
- 4. Additional research should be conducted to determine the relationship between intelligence level, socioeconomic status, family background, and work experience on student career maturity.
- 5. Research should be conducted to determine the effects of parents and other social contacts, both with and without participation in Career Center activities, on student career development and maturity.
- 6. Long-range studies should be conducted to determine the relationship between participation in Career Center activities and the career maturity of students as measured by the Career Maturity Inventory.

APPENDICES

APPENDIX A

PARTICIPATING SCHOOLS

East Lansing High School 509 Burcham Drive East Lansing, Michigan 48823

Godwin Heights High School 3529 S. Division Avenue Wyoming, Michigan 49508

Grand Haven High School 734 Park Street Grand Haven, Michigan 49417

Harry Hill High School 5815 Wise Road Lansing, Michigan 48910

Troy High School 3179 Livernois Road Troy, Michigan 48084

APPENDIX B

INVITATION LETTER

Dear Student:

I am a doctoral student at Michigan State University in education. In cooperation with your Guidance Department and Career Center staff, I am conducting a survey to gather information about the services offered by the Career Center. You have been selected to participate in this study and are requested to report to the (room) on (date) at (time). At that time you will be asked to complete a questionnaire related to the functions of the Career Center, for which there are no wrong answers.

Approximately two to three weeks after the completion of the survey, you will receive an individual profile of your responses. These results will indicate your feelings and ideas about the choice of a career and the services offered by the center. Your cooperation in this matter is appreciated.

Thank you.

Daniel R. Seik Michigan State University

APPENDIX D

CAREER CENTER QUESTIONNAIRE

The purpose of this questionnaire is to provide an accurate characterization of five Career Centers in the State of Michigan. Each section relates to a different part of the Career Center operation. At the end of the questionnaire, a section has been set aside for remarks and any informal discussion of your Career Center you think would be useful in this study. If you feel that there are important parts of your Career Center's operation which have been under-emphasized or omitted from this questionnaire, please note them in that place.

Career Center Director and others associated with the operation of the center should complete this questionnaire. The more attention you are able to give to your responses, the more useful will be the results of the study.

PART I

General Information	
Name of person completing form	Position
School	District
Number of students	Grade levels represented
Percentage of graduates conti	nuing on to 2 to 4-year colleges%
How long has the Career Cente	r been in operation?
Career Center hours: Opens _	Closes
Is the Center open for night	school adults? Yes No Hours
Please describe the Career Ce the school:	nter location in reference to the rest of

Is this location easily accessible to the general student population? Yes _____ No ____ Please indicate the title of the Career Center staff member who usually performs each of the following functions (if more than one, indicate both) and the number of hours each week the staff member spends performing each function:

	Title of Demon	Number of Hours Ea		urs Eac	ch Week
Function	Performing the Task	0-5	6-10	11-25	25-40
Counseling	<u>1.</u> 2.				
Assist students in locating information	<u>1.</u> 2.				
Administering Interest Surveys	<u>1.</u> 2.				
Interpreting Interest Surveys	<u>1.</u> 2.				
Conducting student orientations	<u>1.</u> 2.				
Maintaining bulletin board	<u>1.</u> 2.				
Up-dating student files	<u>1.</u> 2.				
Keeping career informa- tion current (catalogs, etc.)	<u>1.</u> 2.				
Attracting students to the Center (PR)	<u>1.</u> 2.				
Placement: Exploratory work expe- rience plus supervision (jr. high and high school)	<u>1.</u> 2.				
General work experience plus supervision (Paid, with related instruction)	<u>1.</u> 2.				
College or other education or vocational training	<u>1.</u> 2.				
Job placement (full or part-time)	<u>1.</u> 2.				

	Title of Person	Numbe	r of Ho	ours Ead	ch Week
Function	Performing the Task	0-5	6-10	11-25	25-40
Inservice training pro- grams for counselors and teachers	<u>1.</u> 2.				
Resource assistance to teachers and counselors	<u>1.</u> 2.				
Contacting the business community	<u>1.</u> 2.				
Organizing Career Days or Fairs	1				

Operations

1. Please circle the number that corresponds to the importance of each of the following methods your Career Center employs to attract students:

Very Important	Somewhat Important	No Opinion	Rather Unimportan	Not at All Important	Don't Have
1	2	3	4	5	
1	2	3	4	5	
1	2	3	4	5	
۱	2	3	4	5	
1	2	3	4	5	
1	2	3	4	5	
۱	2	3	4	5	
1	2	3	4	5	
	I I I I I Mportant	2 I Somewhat Important 2 I 2 I 2 I 2 I 2 I 2 I 2 I 2 I 2 I 2 I	No No No No 1 2 1 No 1 2 3 1 1 2 1 1 1 2 1 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 3 3 1 1 3 3 3 1	Very I Comewhat 1 5 2 3 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 2 3 4 1 5 1 6 1 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 4 1 5 1 6 1 7 2 8 1 1 2 1 2 1	Jest constraint Jest constraint Jest constraint 1 2 3 4 2 1 2 3 4 2 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1

- 2. Do you keep updated files on students who use the Career Center? Yes ____ No ____ If no, please indicate the reasons:
- 3. What filing system do you use for the unbound career information?
- 4. Are the A-V materials and printed information displayed so that the students can serve themselves? Yes _____ No _____
- 5. Do you involve the student's parents in the Career planning process? Yes ____ No ____
- 6. Please circle the number that corresponds to the importance of the following Career Center functions:

сь.

	Very Important	Somewhat Important	No Opinion	Rather Unimportan	Not at All Important
To provide a wide range of career information	1	2	3	4	5
To teach decision-making skills to enable the best use of career information.	1	2	3	4	5
To give each student the opportunity to acquire a marketable skill.	ı	2	3	4	5
To provide individual counseling as well as test and interest survey interpretation	1	2	3	4	5
To give the student work experience: "hands on" contact with the world of work.	1	2	3	4	5

7. Which would you say that your Career Center emphasized most strongly? _____a. job placement, work exploration and work experience programs

or

b. counseling, general career orientation, awareness of one's own aptitudes and interests, and teaching decision-making skills.

8. Which interest inventories or tests do you administer?

Are they administered on an individual basis or classwide? Individual _____ Classwide _____

9. How often are the following activities recommended to students after their interest survey results are interpreted?

		Never	<u>Occa-</u> sionally	<u>Often</u>	<u>Very</u> Frequently	Always
Obta expe	ain part-time work erience	1	2	3	4	5
Part worl	ticipate in exploratory « experience	1	2	3	4	5
A cl stud	nange in the program of dies	1	2	3	4	5
Enro voca	olling in an area ational school	۱	2	3	4	5
Obta ins	aining private truction	1	2	3	4	5
Oth	er (please specify):					
10.	What are your plans for	next yea	ir?			
Int	erdependence With Other S	ichool Fu	unctions		Yes	s <u>No</u>
<pre>1. Do any teachers incorporate career education into their classrooms? If "yes," about how many?</pre>						
 Do Career Center representatives speak to classes in the school? 						
3.	Does the Career Center f the school counselors?	feed bacl	k informat	ion to		
4.	Are any faculty members part-time?	staffing	g the Care	er Cent	er 	

5. Please rate from 1 (excellent) to 5 (poor) the kind of cooperation you have had from:

	Excellent			Poor		
Counselors	1	2	3	4	5	
Faculty	1	2	3	4	5	
Administration	1	2	3	4	5	
Vocational teachers	1	2	3	4	5	

6. What attempts are made to encourage teachers to infuse career education in their disciplines (i.e., inservice programs, development of mini-units)?

Bus	iness Community Relations	Yes	No
1.	Do you have contacts in the business community who will employ students? If "yes," about how many?		
2.	Do you have contacts in the business community who will volunteer equipment, time to talk with students, or other services? If "yes," about how many?		
<u>Pla</u> per	<u>cement Service</u> (neglect this section if your Career Cente form placement functions)	r does <u>Yes</u>	not <u>No</u>
1.	Do you maintain a current file on jobs in the community?		
2.	Do you continually and systematically seek out jobs in the community as part of your placement program?		
3.	Do you share job openings that you find with other schools in your district, and vice versa?		
4.	Do you seek feedback from employers of stucents who are placed in jobs?		

Evaluation

1. Please rate from 1 (indicative) to 5 (no relationship) the degree to which the following measures are indicative of Career Center performance:

		<u>Indi-</u> cative				<u>No Rela-</u> tionship
	Student traffic through Career Center	1	2	3	4	5
	Number of students placed in jobs	1	2	3	4	5
	Enrollment increases in voca- tional education classes	1	2	3	4	5
	Degree of faculty cooperation in introducing career oriented material into their regular curriculum	1	2	3	4	5
	Some measure of increased student career awareness	١	2	3	4	5
	Other (please specify):					
2.	Do you have a reasonably object rating the effectiveness of your Center? If "yes," please elaborate.	ive means o r Career	of		Yes	<u>No</u>
3.	Do you poll students and staff w Career Center impact and function	with regard ons?	d to			
4.	Do you obtain follow-up data on have graduated?	students w	who			
5.	Have you attended a Career Cente this year? If "yes," who sponsored it?	er worksho	р			

Financial (Please refer this section to the person best able to complete it)

1. What was the initial source of funding for the Career Center?

2. How were those funds allocated for:

Personnel	\$
Equipment	\$
Materials	\$

3. What Career Center staff, equipment, materials, furnishing, etc., were transferred from other already-existing school programs or resources without additional expenditure?

Personnel:	Equipment:
1.	1.
2.	2.
3.	3.
Materials:	Other:
1.	1.
2.	2.
3.	3.

- 4. What are your yearly operating costs? ______
- 5. What are your present and potential funding sources?

a. b. c. d.

- e.
- 6. Do you anticipate the same, a larger, or a smaller budget, next year?

Same _____ Larger _____ Smaller _____

7. If you had more money for your Career Center, where would you spend it for greatest impact? 8. If your budget was cut for next year, what part of the Career Center program would you eliminate or reduce?

Difficulties Encountered Along the Way

- 1. Who or what (an individual or some available money) was responsible for getting the Career Center off the ground?
- 2. What were the biggest obstacles the Career Center faced at the beginning of its operation?
- 3. What are your biggest problems now?

4. What problems do you anticipate in the future?

Please use this space for any additional comments, information, or qualifications to any of the preceding resources.

PART II

Materials and Equipment Inventory

For each of the following categories, please indicate numerically your present inventory, what you intend to obtain in the near future, and what you would like to but at present are unable to obtain.

Career Information:

Occupational Outlook Handbook VIEW Decks Career Kits

Career Service Subscriptions

Reference books on career, vocational and specialized schools

Career books

Handouts (pamphlets, brochures, reprints)

Files of unbound materials

Present Inventory	Intend to Obtain	Would Like to Obtain

Titles of most helpful sources of career information:

1.	
2.	
3.	
4.	
5.	
6.	
7.	

Materials and Equipment Inventory

College Information: College guides, handbooks, and dictionaries Guides to college majors curricula and specialized programs Financial aid references Miscellaneous

Present Inventory	Intend to Obtain	Would Like to Obtain

Titles of most helpful sources of college information:

1.	
2.	
3.	
4.	

Audo-Visual Materials and Equipment:

Tape players Tape recorder/players Blank cassettes Slide projectors Recorded cassettes Super-8 projectors Super-8 film loops Soundstrip players (cassettes) Soundstrip programs Microfilm readers Headphones Other (please specify): 1. 2. 3.

Present Inventory	Intend to Obtain	Would Like to Obtain

Names o	of most useful hardware:
۱.	
2.	
3.	
Titles	of most helpful software materials:
1.	
2.	
3.	
4.	
5.	
6.	
Which s DIES, e	self-appraisal instruments do you use (JOB-O, OVIS, COPS, etc.)?
1.	
2.	
3.	

4. _____

5. _____

APPENDIX E

STUDENT INFORMATION QUESTIONNAIRE

This is a survey designed to measure the effectiveness of the services offered by the Career Center. Hopefully, your responses will help in the improvement of the center.

First, read each question carefully. Then mark with a #2 pencil the number on the answer sheet that corresponds to the response you selected. If you have any questions, please raise your hand and the monitor will assist you.

- 1. What is your grade level?
 - 1. 9th grade
 - 2. 10th grade
 - 3. 11th grade
 - 4. 12th grade
- 2. What is your sex?
 - 1. Male
 - 2. Female
- 3. How well do you feel you can define your career plan?
 - 1. You haven't decided at all.
 - 2. You have a vague idea of what you want to do.
 - 3. You have a good idea of the general area, but not the exact job.
 - 4. You feel pretty sure about the career you want.
- 4. Have you been through a formal orientation concerning the services offered by the Career Center?
 - 1. Yes
 - 2. No
- 5. How often have you visited the Career Center as part of a class assignment?
 - 1. Never
 - 2. 1-2 times
 - 3. 3 or more times

- 6. How many times have you voluntarily visited the Career Center to find out about colleges, community colleges, or trade schools? ("Voluntary" means free-willed or unforced visits.)
 - 1. Never
 - 2. 1-2 times
 - 3. 3 or more times
- 7. How many times have you voluntarily visited the Career Center to learn more about your own individual interests?
 - 1. Never
 - 2. 1-2 times
 - 3. 3 or more times
- 8. How many times have you voluntarily visited the Career Center to learn more about certain careers?
 - 1. Never
 - 2. 1-2 times
 - 3. 3 or more times
- 9. How many times have you voluntarily visited the Career Center for non-career-related activities (eat lunch, study hall, etc.)?
 - 1. Never
 - 2. 1-2 times
 - 3. 3 or more times
- 10. How many of your teachers have discussed the importance of their subject matter to possible careers (for example, which jobs use Math, English, etc.)?
 - 1. None
 - 2. One teacher
 - 3. Two teachers
 - 4. Three teachers
 - 5. Four or more teachers
- 11. In how many of your courses have you participated in career-related activities (for example, talking about different careers, career opportunities, etc.)?
 - 1. None
 - 2. One course
 - 3. Two courses
 - 4. Three courses
 - 5. Four or more courses
- 12. What is the total number of times you have voluntarily visited the Career Center this year? Do not count formal orientation or class assignments that forced you to visit the center.
 - 1. None
 - 2. 1-2 times
 - 3. 3 or more times

If your answer to the above question (#12) was "none," please proceed to question #22.

- 13. Do you feel the Career Center has been open enough hours during the school day?
 - 1. It has definitely not been open often enough.
 - 2. Sometimes it has been open enough.
 - 3. It has definitely been open enough.
 - 4. I am not sure of the hours when the center has been open during the day.
- 14. While in the Career Center, have you had difficulty finding materials?
 - 1. I have frequently had difficulty.
 - 2. Sometimes I have had difficulty.
 - 3. I have never had difficulty.
- 15. While in the Career Center, how often have you been assisted by the Career Center staff (career aide, counselor, etc.)?
 - 1. Not at all
 - 2. Almost never
 - 3. Sometimes
 - 4. Often
 - 5. Very frequently
- 16. How would you rate the staff in the Career Center?
 - 1. Extremely helpful
 - 2. Helpful
 - 3. So-so
 - 4. Not much help
 - 5. The Center did not have any staff

Various materials available in the Career Center are listed below. Rate each item on how useful it has been to you.

		Very Useful	Somewhat Useful	Not Very Useful	Definitely Not Useful	Not Used at All
17.	Pamphlets, magazines or books about careers	1	2	3	4	5
18.	College, community college or trade school catalogs	۱	2	3	4	5
19.	Loose files containing career information	1	2	3	4	5
20.	Student interest surveys and other inventories	1	2	3	4	5
21.	Audio-visual equipment (film- strip projectors, VIEW machines, CIVS or MOIS computers)	1	2	3	4	5
22.	Work experience (both paid and unpaid)	ı	2	3	4	5
23.	Speakers you have heard	1	2	3	4	5
24.	Field trips to place where people work	1	2	3	4	5
25.	Parents, relatives, friends, etc.	1	2	3	4	5
	Other (specify):	1	2	3	4	5
		1	2	3	4	5
		1	2	3	4	5

26. Do you have any suggestions as to how the Career Center could better serve you in selecting a career?

APPENDIX F

LIST OF CAREER CENTER DIRECTORS

East Lansing High School

Mrs. Joan Oxender, Director Career Information Center

Godwin Heights High School

Mr. Ron Shoemaker, Director Guidance and Special ServicesMs. Virginia Gates, CounselorMrs. Sheila Liner, Career Information Specialist

Grand Haven High School

Mr. Gene Rothi, Director Guidance and Student Services

Mr. Robert Foutz

Mr. Calvin Brondyke

Harry Hill High School

Mr. James Stiles, Director of Guidance

Troy High School

Miss Earla Smith, Director of Guidance

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BIBLIOGRAPHY

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DIFFERENT METHODOLOGICAL APPROACHES TO PHILOSOPHY OF SCIENCE

