

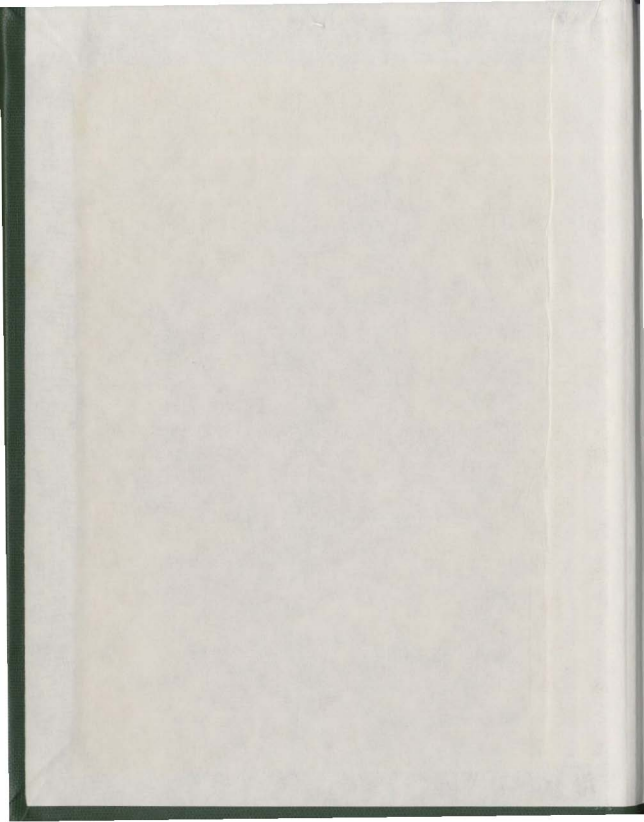
DEVELOPMENT, IMPLEMENTATION
AND EVALUATION OF A SHORT-
TERM CAREER AWARENESS
PROGRAM FOR DELIVERY TO
RURAL SCHOOLS IN
NEWFOUNDLAND

CENTRE FOR NEWFOUNDLAND STUDIES

**TOTAL OF 10 PAGES ONLY
MAY BE XEROXED**

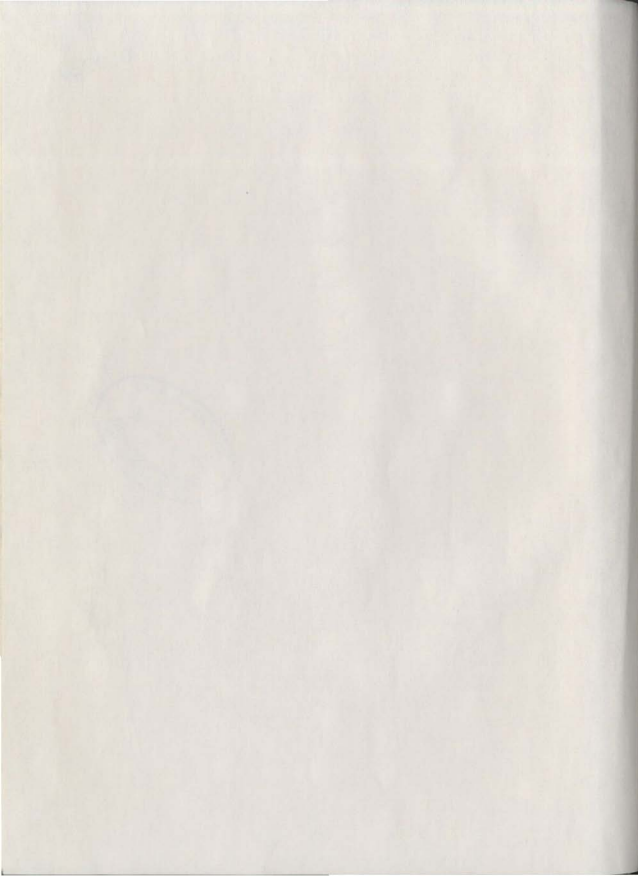
(Without Author's Permission)

NANCY HILDA WILSON



000229







National Library of Canada

Cataloguing Branch
Canadian Theses Division

Ottawa, Canada
K1A 0N4

Bibliothèque nationale du Canada

Direction du catalogage
Division des thèses canadiennes

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us a poor photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

**THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED**

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de mauvaise qualité.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

**LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE**

DEVELOPMENT, IMPLEMENTATION AND EVALUATION OF A SHORT-TERM
CAREER AWARENESS PROGRAM FOR DELIVERY TO RURAL SCHOOLS
IN NEWFOUNDLAND

by
Nancy Hilda Wilson (C)

A Thesis presented in partial fulfilment
of the requirements for the degree of
Master of Education

Department of Educational Psychology
Memorial University of Newfoundland

April, 1979

St. John's

Newfoundland

ABSTRACT

The purpose of this study was to develop, implement and evaluate a short-term Career Awareness program for delivery to ninth grade students attending rural schools in Newfoundland.

Two hundred and six students from 10 rural schools participated in this study. Students from one-half the participating schools were post-tested only after participation in the program, while the remaining students were pre-tested and post-tested with the Career Maturity Inventory (CMI). The two-hour audio-visual program was administered to students during the first two weeks of February and the first two weeks of March, 1979. Each Career Awareness program contained four (4) filmstrips, two (2) cassette tapes with recordings on each side, student work sheets to accompany the filmstrips, and a Career Awareness-Teacher Manual. A teacher evaluation form was sent to each participating teacher to assess the teacher's reaction to the program.

The results of the CMI were analyzed to answer each research question. T-tests were conducted on the data to determine if any significant differences existed in career maturity as a result of exposure to the program, if significant differences existed between the February and March groups, and if significant differences existed between mean scores of students who attended schools with a part-time counsellor and schools with no counsellor. The results of the analysis of variance indicated that significant differences did exist between the mean pre-test and post-test scores of the groups who were

administered both tests. Significant differences did not occur in any other analysis of variance.

The results of the evaluation form were analyzed to assess the teacher's reaction to the Career Awareness program. The results of the analysis of the data indicated that teachers who administered the program felt it was effective with respect to the audio and visual portions. The results revealed that the teachers felt their students would also rate the program as being effective. In addition, all teachers surveyed indicated a willingness to use the program again.

The conclusion was that significant differences did not occur in career maturity as a result of participation in the program, as measured by the CMI; however, teachers assessed the program as being effective and useful.

ACKNOWLEDGEMENTS

The writer wishes to express her sincere thanks to her supervisor, Dr. David Watts, for his invaluable help, guidance and direction not only in the development and completion of this thesis, but also throughout the entire graduate program. Appreciation is also extended to Dr. William Spain, the members of the Institute of Learning Resources, Dr. Jack Russell, and Mr. David Adams, for their assistance during the completion of this thesis.

The author wishes to extend her appreciation to the various school principals, teachers, and students who participated in this study.

To Kathy Day--a special kind of thanks is expressed--your smiles and optimism would cheer anyone's gloomy day.

Finally, the author wishes to express thanks to her family whose understanding, support and encouragement helped her through the graduate program and made this thesis possible.

TABLE OF CONTENTS

	Page
Abstract	ii
Acknowledgements	iv
List of Tables	viii
CHAPTER	
I. THE PROBLEM	1
Statement of the Problem	2
Importance of the Study	2
Sampling Procedure	4
The Population	5
Data Collection	5
Analysis of the Data	6
Research Questions	7
Definition of Terms	7
Basic Assumptions	8
Limitations of the Study	8
Organization of the Remainder of the Study	9
II. REVIEW OF RELATED LITERATURE	10
Theories of Vocational Choice	10
Non-psychological theories	10
Psychological theories	12
General theories	15
Summary	16
Career Education	16
Summary	20
Elements of a Career Education Program	20
Summary	22
Career Maturity Inventory	23
Summary	26
Chapter Summary	26
Organization of the Remainder of the Study	26

CHAPTER

Page

III. PROCEDURES FOR CONDUCTING THE STUDY	28
The Population	28
The Sample	29
Development of the Career Awareness Program	29
Instrumentation	31
Analysis of the Data	33
Organization of the Remainder of the Study	34
IV. FINDINGS OF THE STUDY	35
Research Question 1	36
Research Question 2	39
Research Question 3	40
Research Question 4	41
Analysis of the Evaluation Form	41
Summary	45
V. SUMMARY, INTERPRETATIONS AND RECOMMENDATIONS	48
Restatement of the Problem	48
Summary of the Procedures	49
Method of Analysis	50
Research Questions and Specific Findings	50
Interpretation and Implications of Study Findings	52
Interpretation in terms of previous research	52
Implications for further research	53
Recommendations for Further Research	55
BIBLIOGRAPHY	56
APPENDIX A: MATERIAL FOR THE ASSESSMENT OF THE NEED OF A CAREER AWARENESS PROGRAM: LETTER, FOLLOW-UP LETTER AND QUESTIONNAIRE	61
APPENDIX B: CAREER AWARENESS PROGRAM ANNOUNCEMENT FOR SCHOOLS INTERESTED IN PARTICIPATION IN THE STUDY: LETTER AND INFORMATION SHEET	66
APPENDIX C: INFORMATION TO SCHOOLS REGARDING THE ARRIVAL OF THE CAREER AWARENESS PROGRAM: LETTER	69
APPENDIX D: STUDENT WORKSHEETS	72
APPENDIX E: CAREER AWARENESS TEACHER MANUAL	91
APPENDIX F: COVER LETTER ENCLOSED WITH CAREER AWARENESS PROGRAM	99
APPENDIX G: MATERIAL FOR THE ASSESSMENT OF TEACHER REACTION TO THE CAREER AWARENESS PROGRAM: LETTER AND EVALUATION FORM	101

APPENDIX H: NUMBER OF STUDENTS, MEAN AND STANDARD DEVIATION
OF TESTS ADMINISTERED IN EACH SCHOOL 104

LIST OF TABLES

TABLE	Page
1. T-test in Pre-test and Post-test Scores of the CMI for Students Administered Both Tests	36
2. T-test in Pre-test and Post-test only Scores of the CMI	37
3. T-test in Pre-test and Post-test Scores of the CMI for all Groups	38
4. T-test in Post-test Scores of the CMI for Post-test only Groups and Pre-test and Post-test Groups	39
5. T-test in Post-test Scores of the CMI for Schools Participating in the Career Awareness Program in February and March	40
6. T-test in Post-test Scores of the CMI for Schools with Part-time Counsellors and Schools with no Counsellors	41
7. Evaluation of the Audio Portion of the Career Awareness Program by the Teacher	42
8. Evaluation of the Visual Portion of the Career Awareness Program by the Teacher	43
9. Evaluation of the Career Awareness Program by the Teacher in Terms of the Participating Students' Reaction	44

CHAPTER I

THE PROBLEM

Many schools in North America have developed and implemented career education programs. A large number of these programs were designed to be incorporated into the entire school from K-12, while others were directed towards selected grades (Cross, 1970; Halverda and Solcum, 1970; Diana, 1974; Owen, 1975; Crawford, 1977). In an address concerning career education in general, Martin (1972) stated: "Given the current widespread interests, it is surprising how recently career education has emerged as a national interest" (p. 25). Career education seems to be gaining support from all people, both directly and indirectly involved with the educational system (Martin, 1971; Bedal and Manual, 1975; Briggs, 1975).

Bedal and Manual (1975) noted that in Canada, career education programs are not as abundant in comparison to those in the United States, but "career education will be found more and more in schools across Canada" (p. 347). To date, in Newfoundland and Labrador, no common career education course has been designed and implemented for schools or grades in the Newfoundland school system. Many schools in Newfoundland also lack the services of a full-time counsellor, who could provide students with valuable career information (Kennedy, 1978).

Statement of the Problem

The purpose of this study was to develop, implement and evaluate a Career Awareness Program. This program was designed as a short-term audio-visual presentation which could be administered to students by untrained personnel. The program was short-term since this would make it available to the students and teacher without much disruption of the normal class schedule. The program consisted of four filmstrips with accompanying cassette tapes, a teacher's manual and student work sheets.

The Career Awareness program was implemented in 12 schools throughout the rural areas of Newfoundland. The entire program was delivered to the students in four sessions, with each session being approximately one class period (30 minutes) in length. The program was implemented in the schools over a six week period.

The evaluation of this study consisted in part of post-tests administered to one-half of the participants and a pre-test and post-test administered to the remaining participants. Specifically, the evaluation of the program attempted to answer two questions:

1. Does a short-term Career Awareness program change the career maturity of ninth grade students in rural Newfoundland?
2. Is there any significant difference of career maturity of ninth grade students attending schools with part-time counsellors compared to schools with no counsellor?

Importance of the Study

The number of career education programs in schools in Canada have been growing during the past few years and it is forecast that

3

career education programs will continue to infiltrate the Canadian school system (Bedal and Manual, 1975). Students in rural settings, as compared to those in urban areas, are at a disadvantage with respect to career education. The results of research have shown that rural students have less realistic knowledge of the world of work and its opportunities than those in urban areas. Students in rural areas do not frequent information centers where available, nor do they deliberately seek information from counsellors, teachers or other beneficial persons as often as urban students (Hilverda and Solcum, 1970; Pucinski, 1972; Hackney, 1975; Sartin, 1977).

In Newfoundland and Labrador, many schools are without counsellors. Only 53 counsellors, of whom 35 are full-time, provide services to some of the 697 schools. Divided among Newfoundland and Labrador's 461 elementary schools, 72 elementary and secondary schools, 28 junior high schools, and 136 high schools are two counsellors at the system level, 16 part-time counsellors, and 35 full-time counsellors (Kennedy, 1978).

In January, 1978, a letter and questionnaire (see Appendix A) were sent to the principals of 48 rural schools in Newfoundland. The letter advised the principals that a Career Awareness program was being developed for the use of ninth grade students. The questionnaire consisted of various questions related to the program and the school.

The return rate of the questionnaire was 85 per cent (41). The results indicated that of the rural schools sampled, 2 per cent (1) had a full-time counsellor, 5 per cent (2) had a counsellor at

board level, 19 per cent (8) had a part-time counsellor, and 70 per cent (29) did not have a counsellor.

Other results of the questionnaire indicated that 96 per cent (39) felt a Career Awareness program was needed in their school. A willingness to let their ninth grade students participate in the Career Awareness program as described in the cover letter was indicated by 88 per cent (36) of the respondents. Results indicated that 94 per cent (38) of the respondents had not had a comprehensive career education program implemented in their school within the past ten years.

The questionnaire was intended to assess the need for a program such as the one described in the accompanying letter, and to assess the needs of ninth grade students by their principals. An analysis of the results indicated a definite felt need for career education and a willingness to participate in such a program.

A follow-up letter (see Appendix B) was sent during November, 1978, to all the respondents who indicated a willingness to participate in a study of a short-term Career Awareness program who did not have a full-time counsellor, in order to ascertain that they were still prepared to have their schools participate. Of the 33 principals contacted in November, 1978, 21 responded in the affirmative.

Sampling Procedure

The sample used in this study consisted of 12 schools selected randomly from the 21 whose principals had responded affirmatively to the follow-up letter sent in November, 1978. Of the 12, six schools had part-time counsellors and six had no counsellors.

The Population

The population chosen for the study was comprised of the grade nine classes located in rural schools with a total enrollment of less than 200 students. Schools that had the services of a part-time counsellor and schools which had no counsellor were included, and schools that had a full-time counsellor were excluded from the study. Schools which had had or presently have a comprehensive career education program were also excluded from the study.

Data Collection

During January, 1978, a letter and questionnaire (see Appendix A) were sent to 48 schools meeting the population criteria. The purpose of this questionnaire was to assess the need for a career education program and to determine the eligibility of the school to participate in the study. The criteria for eligibility were that the school had not had a comprehensive career education program within the past 10 years, and that the school did not have the services of a full-time counsellor. A follow-up letter and questionnaire were sent to schools which had not returned the questionnaire within three weeks.

A second letter and information sheet (see Appendix B) was sent to 33 eligible schools in November, 1978. From the 21 information sheets returned, a sample was randomly selected.

Members of the sample were sent letters in January, 1979, indicating the date when they should expect the program to arrive. During the last week in January and February the programs were mailed to the participating schools. Included in the materials sent to the

schools were the audio-visual Career Awareness program, student work sheets, a teacher's manual, and the Career Maturity Inventory (CMI) with accompanying answer sheets. The CMI was the measurement instrument employed in this study. The students were administered the program and the CMI by the teacher. The entire program, minus the student work sheets and the CMI, was mailed back after the students had participated in the study.

The CMI was developed by John O. Crites in 1973 and revised in 1978. The inventory consisted of 50 true or false statements. The ninth grade students in one-half of the schools were pre-tested and post-tested with the inventory, the students in the remaining schools were post-tested only. Data were analyzed for all the students who completed the inventory.

During March, 1979, a follow-up letter and evaluation form (see Appendix G) were mailed to each school to assess the teacher's reaction to the Career Awareness program. Data were analyzed for all returned evaluation forms.

Analysis of the Data

All inventories were scored by hand with the use of the answer key provided by McGraw Hill Inc. (1978), the publisher of the CMI. The t-test was used to determine the effect of a pre-test on the post-test, the effect of history and maturation on the two sets of results obtained in February and March, and the change in career maturity before and after participation in the program. A t-test was also calculated on the post-tests between schools which had the services of a part-time counsellor and schools which did not have any counsellor.

Research Questions

The method of analysis for this study provided a basis for answering the following questions:

1. Are there any significant differences between the pre-test scores and the post-test scores as measured by the CMI?
2. Are there any significant differences between the scores of the post-test only group and the post-test scores of the pre-test and post-test group as measured by the CMI?
3. Are there any significant differences between the post-test scores of the group participating in the study in February and the group participating in the study in March as measured by the CMI?
4. Does a significant relationship exist between the post-test scores of the participants in schools with part-time counsellors and schools with no counsellor as measured by the CMI?

Definition of Terms

For the purpose of this study, the following terms used throughout the study and Appendices were defined:

Career Awareness program: For the purpose of this study, Career Awareness program is defined as the program developed by the author for this study. Included in the program are filmstrips, cassette tapes, teacher manual and student work sheets.

Session: For the purpose of this study, session is defined as an independent 30-minute segment of the Career

Awareness program. In each session there were a film-strip, a cassette tape, and accompanying student work sheets.

Short-term: For the purpose of this study, short-term is defined as the length of time taken to view the entire Career Awareness program, approximately two hours.

Rural: For the purpose of this study, rural is defined as any community in Newfoundland with a population of less than 3,000, and at least 50 miles from a town with a population greater than 20,000.

Basic Assumptions

1. The CMI is a valid criterion instrument for evaluating the Career Awareness program.
2. The participating teachers administered the Career Awareness program in a standardized manner to the students.
3. The participating teachers adhered to the directions for administering the CMI as outlined in the Administration and Use Manual (Crites, 1978a).
4. The students responded openly and honestly to the statements in the CMI.

Limitations of the Study

This study is subject to the following limitations:

1. Each secondary school and its student body are unique. Generalizations from this study are limited to the extent that there are similarities.

2. There may be factors in the environments and backgrounds of the individual students that affect the students other than the factors being studied or controlled.
3. The criterion instrument is limited to the extent of the measured reliability and validity.
4. Only rural schools without full-time counsellors were studied.

Organization of the Remainder of the Study

Chapter II of this study contains a review of the related literature. Presented in the third chapter is a description of the sample, development of the program, the instrument used to evaluate the Career Awareness program, and the methodology of the study. The results of the analysis of the data are presented in Chapter IV. Chapter V includes a summary of the results, interpretations, and recommendations for future studies.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this study was to develop, implement, and evaluate the Career Awareness program. Literature which is related to the problem and which will help place the results in proper perspective will be explored in this chapter. The first section will discuss various selected theoretical positions of vocational choice and development. This is followed by a discussion of research on career education. The third section explores various elements of a career education program, which is followed by a review of selected studies regarding evaluations of career education programs which used the Career Maturity Inventory as the evaluation instrument.

Theories of Vocational Choice

Theories of vocational choice can be divided into several general categories. Crites (1969) categorized the numerous theories of vocational choice into three categories: non-psychological, psychological, and general. These categories were divided further by Crites such that theories could be better represented in his classification according to each theory's particular characteristics and emphases. Theories applicable to this study are reviewed in this section.

Non-psychological theories. Crites (1969) described non-psychological theories as those "which attribute choice phenomena to

the operation of some system which is external to the individual"

(p. 79).

Roe's (1957) theory of vocational choice is considered by Crites (1969) to be a non-psychological theory. Roe (1957) based her theory on the needs of a person. The child's interaction with parents, produce certain needs which later are transferred to a vocational choice. Roe postulated that the home environment could be one of emotional concentration on the child, avoidance of the child, or acceptance of the child. Depending on the type of home environment in which the child was raised, certain needs within the child would tend to be satisfied, while other needs were not. During early childhood experiences, certain attitudes, interests, and capacities are developed, which are later expressed in adult life, including the vocational choice of the adult. These attitudes, values, and capacities are expressed towards a vocational choice in a general rather than specific manner.

Roe (1957) has defined groups of careers such as business, technology, and outdoors, which a person is most likely to enter according to the type of home environment experienced as a child. Roe stated that each person attains a level in his career--unskilled to professional--and the level attained at mid-life may be a result of the person's need intensity. For example, a person raised in an over-demanding home may prefer a career in the area of general culture; a rejecting home may invite a person to a career in the science field, and persons raised in over-protected homes would tend to prefer careers within the service industry.

Psychological theories. Crites (1969) defined psychological theories as those that "focus more upon the individual per se as the crucial variable in the vocational decision-making process" (p. 90).

One theory Crites (1969) considered a psychological theory is that of Bordin, Nachman and Segal (1963). Bordin et al. developed a theory of vocational development based on psychoanalytic theory. The basic assumption in this theory is that:

Insofar as he has freedom of choice, an individual tends to gravitate around those occupations whose activities permit him to express his preferred ways of seeking gratification and protecting himself from anxiety. (Bordin, 1968, p. 427)

Bordin et al. (1963) also assumed that development begins at conception and continues to old age but that the essential pattern of needs is established before age six, and that complex adult activities complement simple infantile activities insofar as they have the same instinctual sources of gratification.

Bordin et al. (1963) theorized that each occupation can be described in terms of its ability to satisfy various needs along different dimensions or body zones. The psychologically based dimensions include nurturant (feeding and fostering), manipulative activities, sensual activities, activities derived from anal impulses, genital, exploratory, flowing-quenching, exhibiting and rhythmic movement activities. These activities or needs may be expressed and satisfied in an occupation. Bordin (1968) defined various aspects of the

dimensions which provided a framework in which activities or needs can be expressed and satisfied in an occupational choice. One aspect was the degree of importance each dimension had to an occupation. The second was the means through which a particular impulse was expressed to satisfy the psychic dimension, or the instrumental mode. The third aspect, "objects," indicated the person or thing to which the activity was directed. Work also had a sexual mode--either masculine, feminine, or no sex. Lastly, the fifth aspect dealt with the affective domain. An activity might be either accepted or rejected.

Bordin *et al.* (1963) contended that each occupation could be described in these dimensions and that no one occupation could be described by a single dimension. The more complex occupations would have more complex classifications within the system.

Crites (1969) classified Super's (1953) theory of vocational development as a psychological theory under the subsection of developmental theories. Super believed that vocational choice was a process and that certain processes occur at different developmental stages. Super's theory might be considered a self-concept theory (Crites, 1969).

Zaccaria (1970) summarized Super's theory:

... Super describes vocational development as the developing and implementing of a self-concept in the context of work. The self-concept evolves and develops during the growth and exploratory stages. Through various types of general activities and exploratory behavior, the individual both differentiates himself from others and sees certain similarities between himself and others. As sensations, perceptions and experience become more ordered and well articulated, the early self-percepts become broader, more abstract, and comprehensive until the self-concept, *per se*, emerges.

A vocational self-concept is part of the global self-concept. It is the self-concept which guides the individual into and through his career experience. . . . Super consistently emphasizes the developmental process unfolding

as the individual develops, specifies, and implements his vocational self-concept. (p. 53)

Super stated his theory as a series of 10 propositions.

Although Kline (1975) claimed that these propositions did not constitute a theory but rather a statement of facts, Super's theory has been cited by many authors (Zytowski, 1968; Crites, 1969; Peters and Hanson, 1971; Evans et al., 1973; Calhoun and Finch, 1976; Shertzer and Stone, 1976). Super (1953) stated the ten propositions of his theory as:

1. People differ in their abilities, interests and personalities.
2. They are qualified, by virtue of these characteristics, each for a number of occupations.
3. Each of these occupations requires a characteristic pattern of abilities, interests and personality traits, with tolerances wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.
4. Vocational preferences and competencies, the situations in which people live and work, and hence their self-concepts, change with time and experience (although self-concepts are generally fairly stable from late adolescence until late maturity), making choice and adjustment a continuous process.
5. This process may be summed up, in a series of life stages characterized as those of growth, exploration, establishment, maintenance, and decline, and these stages may in turn be subdivided into (a) the fantasy, tentative and realistic phases of the exploratory stage, and (b) the trial and stable phases of the establishment stage.
6. The nature of the career pattern (that is, the occupational level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socioeconomic level, mental ability, and personality characteristics, and by the opportunities to which he is exposed.
7. Development through the life stages can be guided, partly by facilitating the process of maturation of abilities and interests and partly by aiding in reality testing and in the development of the self-concept.

8. The process of vocational development is essentially that of developing and implementing a self-concept: it is a compromise process in which the self-concept is a product of the interaction of inherited aptitudes, neural and endocrine makeup, opportunity to play various roles, and evaluations of the extent to which the results of role-playing meet with the approval of superiors and fellows.
9. The process of compromise between individual and social factors, between self-concept and reality is one of role-playing; whether the role is played in fantasy, in the counselling interview, or in real life activities such as school classes, clubs, part-time work or entry jobs.
10. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits and values; they depend upon his establishment in a type of work, a work situation, and a way of life in which he can play the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate. (Super, 1953, p. 190)

General theories. General theories of vocational choice are those which do not focus on one factor of a vocational choice, but rather they recognize various factors as having an influence on the final choice (Crites, 1969).

Holland's (1973) theory of vocational choice is considered by Crites (1969) to be a general theory. Holland's primary concern which led to the development of his theory was to explain vocational behavior and to help people choose a satisfactory career. Holland (1973) based his theory on four basic assumptions:

1. In our culture most persons can be categorized as one of six types: realistic, investigative, artistic, social, enterprising or conventional.

2. There are six kinds of environments: realistic, investigative, artistic, social, enterprising and conventional.
3. People search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles.
4. A person's behavior is determined by an interaction between his personality and the characteristics of his environments. (pp. 2-4)

Holland (1973) assumed that the personality is a product of inherited factors and the environment. To choose a satisfactory career one must attempt to match his personality traits with a career that corresponds with these traits. Since the personality is partially determined by environment, Holland's theory allowed for a change in careers throughout one's life due to a changing environment. Thus, a vocational choice was never definite.

Summary. Theories of vocational choice and development can be divided into three broad categories: non-psychological, psychological, and general (Crites, 1969). The theories included in each of these categories vary with respect to their own characteristics and emphasis as discussed in the summaries of the theories of Roe (1957), Bordin, Nachman and Segal (1963), Super (1953), and Holland (1973). For the purpose of this study, Super's (1953) theory was used to establish a theoretical framework.

Career Education

Breton (1972) conducted a study of social and academic factors as related to vocational indecision of Canadian youth. The sample of 373 secondary schools (145,817 students) was selected from all 10 Canadian provinces.

Breton's results indicated that Newfoundland ranked third highest with respect to the percentage (80.9%) of boys planning to finish high school, and fourth highest with respect to the percentage (83.4%) of girls planning to finish high school in comparison to the other Canadian provinces. For both girls and boys, Newfoundland had the lowest percentage (50.6% and 51.6%, respectively) of students planning to attend post-secondary school in comparison to the other provinces.

Breton also compared the diffusion of vocational information to students with low mental ability and socio-economic background. He found that there was less indecision among students of low mental ability and socio-economic status if vocational information was made available to them. In general, Breton concluded that the amount of educational and occupational information available to the students was positively associated with their ability to formulate career goals and their vocational competence.

Super and Overstreet (1960) conducted a longitudinal study of vocational maturity with 105 ninth grade students. The dimensions and indices which Super and Overstreet deemed appropriate to measure the vocational maturity of their sample were:

Dimension 1. Orientation to Vocational Choice

- 1A. Concern with Choice
- 1B. Use of Resources in Orientation

Dimension 2. Information and Planning

- 2A. Specificity of Information
- 2B. Specificity of Planning
- 2C. Extent of Planning Activity

Dimension 3. Consistency of Vocational Preferences

- 3A. Consistency of Vocational Preferences within Fields
- 3B. Consistency of Vocational Preferences within Levels
- 3C. Consistency of Vocational Preferences within Families

Dimension 4. Crystallization of Traits

- 4A. Degree of Patterning of Measured Interests
- 4B. Interest Maturity
- 4C. Liking for Work
- 4D. Degree of Patterning of Work Values
- 4E. Extent of Discussion of Rewards of Work
- 4F. Acceptance of Responsibility for Choice and Planning

Dimension 5. Vocational Independence

- 5A. Independence of Work Experience

Dimension 6. Wisdom of Vocational Preferences

- 6A. Agreement between Ability and Preference
- 6B. Agreement between Measured Interests and Preference
- 6C. Agreement between Measured Interests and Fantasy Preference
- 6D. Agreement between Occupational Level of Measured Interests and Level of Preference
- 6E. Socio-economic Accessibility of Preferences. (p. 51)

Super and Overstreet (1960) discovered that the indices which did not define vocational maturity in grade nine students were Consistency of Vocational Preferences, Dimension 3; Crystallization of Traits; Dimension 4; Vocational Independence, Dimension 5; and Wisdom of Vocational Preferences, Dimension 6. The indices which did define vocational maturity were Orientation to Vocational Choice Tasks and the Use of Resources, Dimension 1. Orientation to Vocational Choice Tasks included the awareness of the need to make vocational choices, as well as the various factors affecting this choice and the acceptance of the responsibility for making such choices. The Use of Resources included talking to people; participating in activities related to the occupational choice, and collecting printed material which would provide valuable information related to both the occupational choice and the world of work in general.

The results of this longitudinal study were summarized by the researchers as:

Thus, vocational maturity in ninth grade boys studied appears to consist of behavior which might be characterized as preparation for vocational choice, of orientation attitudes and activities. It is behavior in which the subject looks ahead, considers what the future may hold for him, and engages in thinking, planning and actions which may help him meet the future. The important aspect is that the individual recognizes the eventual need for goals and the desirability of developing them. According to our data, vocational maturity in the ninth grade does not appear to involve having consistent or realistic vocational preferences, having clear cut interests or work values, or having had independent work experience . . . Vocational maturity in the ninth grade is shown, not by where they have arrived vocationally, but how they are thinking about goals and what they are doing about them.

(Super and Overstreet, 1960, p. 63)

In the book Career Education in the Middle/Junior High School, Evans, Hoyt and Magnum (1973) conducted a review of the literature regarding career development in the middle/junior high school. By means of this literature review, Evans et al. developed several generalizations which were common to all the literature. These generalizations were obtained from the literature regarding both theoretical positions and career programs implemented in schools. Among the generalizations concluded by Evans et al. (1973) were:

Middle and junior high school age youth arrive at their schools with work values which, in the absence of intervention, are likely to remain remarkably stable through the twelfth grade.

For more than 70 per cent of the students specific vocational choices expressed by middle/junior high school people can be expected to change before they reach the twelfth grade.

The vocational maturity of middle and junior high school students can be enhanced through systematic exposure to the world of occupations, sound counselling and guidance and experience with work.

Abilities and aptitudes, while demonstrably important in vocational decisions made by adults, are not fully developed within most middle and junior high school aged students.

Abilities, aptitudes, values and attributes related to work, to occupations and to careers are in process of development during the middle/junior high school years and may be affected remarkably by career education programs. (pp. 62-63)

The results of several other studies (Gribbons and Lohnes, 1968; Wircenski, 1972; Bennkoph, 1975) tend to confirm the general conclusions noted above.

Summary. Results of research have indicated that in general students in the junior high school years have not yet decided upon a definite vocational choice and, if so, this choice may be expected to change. Students at this age are developing interests, attitudes, values and goals and the diffusion of vocational information would be an asset to students in their vocational development and maturity.

Elements of a Career Education Program

Sartin (1977) focused his attention on American youth. He believed that:

The typical American youth is believed to make program, job and career decisions on inadequate information. . . . Career education has renewed our awareness of the importance of this information--information which has been cited as important for several decades. (p. 28)

Hackney and Williams (1975) were also concerned with students who were not exposed to adequate career information;

Experience has shown that many students in need of career awareness information do not seek assistance for whatever reason. They do not frequent the career information centers or seek information from counsellors or other helpful individuals. Taking the information services to them in the classroom, where they would ordinarily be, alleviates this problem. (p. 13)

Hackney and Williams believed that career awareness information should be presented to the student from the general to the specific.

In her paper, "Advancing Career Education," Martin (1972) suggested a very general goal for career education, specifically,

Their common goal is to respond to the student's specific immediate educational needs in a manner that serves his long term aspirations for a satisfying and meaningful life after his schooling is ended. (p. 25)

Hansen and Tennyson (1974) described the educational aim for career education as being,

To develop self-aware flexible persons who can realize their potentials and acquire the competencies needed to work out relationships between themselves and a complex changing society. (p. 641)

Miceli (1974) thought that the primary objectives of career education were to "stimulate self-awareness, economic awareness, and career awareness" (p. 38).

Although these selected views on the objectives, goals and aims of career education differed, the underlying theme was basically the same for all, that was to help prepare students for the future.

With regard to actual program development, Calhoun and Finch (1976) advised that career guidance programs in the middle school level should include:

- (a) Exploring the relationship between student characteristics and occupational and educational requirements.
- (b) Learning the process involved in planning and implementing occupational goals.
- (c) Learning educationally and vocationally related behaviors.
- (d) Beginning to develop tentative plans for the future. (p. 193)

Such a program would give the student an adequate knowledge of careers which would enable the student to choose tentative careers in various fields.

Hansen and Tennyson (1974) described their model for career education in the junior high years as covering the following points:

- (a) Clarifying self-concept.
- (b) Assume responsibility for career planning.
- (c) Formulate tentative career goals.
- (d) Acquire knowledge of occupations, work settings and life styles.
- (e) Acquire knowledge of educational and occupational resources.
- (f) Develop awareness of the decision-making process.
- (g) Acquire a sense of independence. (p. 642)

Clements (1977) listed activities which she felt were of major importance to the grade nine students. She suggested that students should be helped to:

- 1. Explore occupational areas of particular interest and to assess their interests, abilities and aversions.
- 2. Become familiar with the wide range of careers within each occupational cluster.
- 3. Develop an awareness of relevant factors to be considered in choosing a career.
- 4. Gain experience in meaningful decision-making.
- 5. Develop preliminary career plans and arrive at a tentative career choice. (p. 13)

Other career education programs for the junior high school years contained many of the basic elements outlined in the above discussion. The research conducted on career education programs by Briggs (1975), Feltham (1975), Owen (1975), and McCarthy (1976) supported the basic elements of career education programs discussed by Hannon and Tennyson (1975), Calhoun and Finch (1976), and Clements (1977).

Summary. Although the three selected approaches of career education programs cited are different since they emphasized different areas,

in essence, the three programs contained similar fundamental concepts. The need for the student to explore his own self-concept, personality characteristics, interests, abilities, and aversions was one underlying concept throughout the programs. The second factor common in the programs was the need for the student to have a basic understanding of decision-making skills. A third common factor was the knowledge of various careers which were available to the student from which a tentative choice could be made.

Career Maturity Inventory

The Career Maturity Inventory (CMI) was developed by John O. Crites, in 1973, and revised in 1978. Originally, this inventory was entitled the Vocational Development Inventory (VDI). Crites (1978a) stated that the CMI had been "conceived and constructed to measure the maturity of attitudes and competencies that are critical in realistic career decision-making" (p. 3). The five attitudinal variables measured by the CMI Attitude Scale were:

1. decisiveness in career decision-making;
2. involvement in career decision-making;
3. independence in career decision-making;
4. orientation to career decision-making;
5. compromise in career decision-making.
(Crites, 1978b, p. 10)

Although the CMI Attitude Scale has been used for purposes other than the evaluation of career education programs, such as screening for career immaturity and testing career counselling, Crites (1978a) stated that "the CMI was a useful inventory to evaluate the effectiveness of a career

education program, even as early as Grade 6" (p. 34).

Clapsaddle (1973) was interested in the vocational development of sixth grade children who were taught by teachers who had attended a teacher training course on career education as compared to teachers who had not attended this course. The participants of the Career Education Teacher Inservice Preparation course met for a three hour period for 15 weeks. Results of this study indicated that the students taught by teachers who had received career education training did score significantly higher on the VDI than those students taught by teachers who did not participate in the program. Onvig (1974) obtained similar results in a study of the effectiveness of career education for sixth and eighth grade students.

Swails and Herr (1976) studied the vocational development of ninth grade students who were exposed to four different conditions-- relationship counselling; group counselling using taped models; game playing using the Life Career Game; and a control group. Each group, except for the control group, met with a counsellor once a week for eight weeks. The length of each meeting was approximately 50 minutes.

The students were pre-tested and post-tested with the VDI. Analysis of the results revealed that no significant difference was found between the pre-test and post-test or between male and female participants in any of the four group approaches. Swails and Herr (1976) concluded that:

This study contributes to the current ambivalence in the research literature about the utility of short term group approaches in the vocational development of high school students. The one clear finding is that direct application of group techniques, such as those used in this study, to affect the complex process of career development in an

eight week period is expecting more than can be delivered by most students. Whether increasing the amount of time or altering the group approaches would have made a difference in outcomes is not known. (p. 259)

A study comparing different approaches to career education was conducted by Randolph and Grantham (1973). The purpose of their study was to compare the same career development program presented via a behavior management approach, a traditional teaching approach and no program presented to a control group. In each of the three groups, five fifth and sixth grade classes were randomly assigned. These classes, except the control group, met for 10 weekly 45-minute lessons. The VDI was the instrument used to assess the maturity of vocational attitudes. The authors reported that:

The analysis of variance performed on the Vocational Development Inventory resulted in an F-ratio significant beyond the .01 level. A Scheffé test indicated that the CBM (Classroom Behavior Management) group obtained significantly higher scores (.01 level) than either the traditional or the control group. The control group's mean was significantly higher (.05 level) than the traditional group. (p. 295)

Feldman and Marinelli (1975) conducted an occupational exploration program for prison inmates. The 90 subjects were evenly divided into six groups of 15 subjects. During each of the six sessions, five subjects were randomly assigned to either an experimental, control-attention-placebo, or control group. Each subject was administered a VDI. The authors reported that the analysis of variance indicated the mean of the experimental group was significantly higher than that of the two control groups. The results of studies conducted by Goodson (1969) and Kershner and Blair (1975) were similar to the results noted above.

Summary. Results of research on the CMI presented conflicting evidence with respect to the evaluation of career education programs. Although the CMI was developed to measure career maturity in general, several researchers (Goodson, 1969; Clapsaddle, 1973; Randolph, Grantham, 1973; Onvig, 1974; Feldman and Marinelli, 1975; Kershner and Blair, 1976; Swails and Herr, 1976) used the CMI to evaluate career education programs. The results of studies which employed the CMI as the evaluating instrument of career education programs in general tend to confirm its usefulness. Other results presented conflicting evidence regarding this use of the CMI.

Chapter Summary

The literature concerning the concept of career education was reviewed. The theoretical bases of career development were discussed in a review of selected theories. A review of the results of research on career education in general, and ninth grade students in particular, were discussed. Basic elements which should be included in a career education program for junior high school students were assessed. The evaluation of various short-term career education programs which used the Vocational Development Inventory (VDI) as the measurement instrument were discussed. In 1973, Crites (1978a) changed the name of the VDI to the Career Maturity Inventory (CMI).

Organization of the Remainder of the Study

The third chapter contains a description of the population and sample; the development of the Career Awareness program; a discussion of the CMI, and the methodology of the study. Chapter IV presents the

results of the analysis of the data, and Chapter V concludes with a summary of the results, interpretations and recommendations.

CHAPTER III

PROCEDURES FOR CONDUCTING THE STUDY

This chapter describes the population and sample used in this study, the development of the Career Awareness program, the Career Maturity Inventory (CMI) which was the measurement instrument, and the methodology of the analysis of the data collected in this study.

The Population

During January, 1978, 48 schools were selected from the Directory of Schools, 1976-77 for Newfoundland and Labrador to be sent a letter of intent and a questionnaire. From the data provided in the Directory of Schools, each school selected met the criteria of being both rural and less than 200 students enrolled. Of the 41 returned questionnaires, the assessment indicated that 33 schools met the requirements for participation in the study. The requirements were that the school did not have a full-time counsellor, a comprehensive career education course had not been implemented in the school within the past 10 years, and the principal was willing to allow the ninth grade students to participate in the program.

During November, 1978, the 33 schools which met the requirements for participation in the study were sent letters announcing the program. The letters were accompanied by information sheets which were to be answered by the principal and returned if the principal was still willing to have his students participate in the Career Awareness program.

Twenty-one information sheets were returned. The 21 schools were divided into two categories, those with part-time counsellors and those with no counsellor. From each category, six schools were randomly selected to participate in the study.

In January, 1979, all 21 respondents were contacted by letter (see Appendix C) to inform them of the results of the selection. The 12 who had been randomly selected to participate in the study were informed of the time when they would receive the Career Awareness program. The nine schools not selected for the study were informed that they would receive the Career Awareness program, but that their students would not be a part of the study.

The Sample

The sample consisted of 12 schools which were located in rural areas of the island of Newfoundland. These schools did not have full-time counsellors and had not had a comprehensive career education program in their school within the past 10 years. The student enrollment in each school was less than 200. The enrollment of the ninth grade classes ranged from 12-36. Of the schools participating, six did not have the services of a counsellor, while the other six schools had a part-time counsellor.

Development of the Career Awareness Program

During January, 1978, letters explaining the then proposed program with accompanying questionnaires were mailed to 48 rural schools. A follow-up letter and questionnaire was mailed to schools that had not responded by late February, 1978. The analysis of results from the 41

(85%) returned questionnaires indicated a need for a Career Awareness program and the willingness of principals to administer the Career Awareness program to their students.

Development of the program began in September, 1978, with a review of the literature to establish a theoretical framework, the criterion for development of a career education program suitable for ninth grade students, and to assess measurement instruments for use in the study. Scripts were then written for each of the four sessions of the program. These scripts were evaluated and criticized by a junior high school counsellor, an expert in audio-visual education and the author's supervisor. An assessment of the criticisms and suggestions made by these readers were considered in the final form of the scripts. Slides to accompany the scripts were prepared and student work sheets to accompany each session were drafted and duplicated. A Career Awareness-Teacher Manual was written to help familiarize teachers with the content and objectives of the program. The slides were duplicated into film-strip format. The scripts were recorded on cassette tapes. Copies of the audio-visual materials were duplicated for each of the four sessions.

During the last week of January, six of the schools, three with part-time counsellors and three with no counsellors, were mailed the program packets. During the last week of February, the remaining six schools, three with part-time counsellors and three with no counsellors, were mailed the program packets. Each program packet contained the following materials: (1) one student work sheet per session per student (see Appendix D); (2) one CMI per student with accompanying answer sheets; (3) an Administration and Use Manual (Crites, 1978a) for the

CMI; (4) a Career Awareness-Teacher Manual (see Appendix E); (5) four filmstrips--one of each session; (6) two cassette tapes with two sessions recorded on each; (7) return address label and postage; and (8) a cover letter (see Appendix F).

Instrumentation

The instrument used in this study was the Career Maturity Inventory (CMI) Screening Form, A-2 (1978). The CMI was developed by John O. Crites. This inventory consisted of 50 true-false statements. The approximate administration time of this instrument was 20-30 minutes.

The CMI was selected to be the instrument employed in this study. The CMI met the criteria necessary to evaluate the Career Awareness program effectiveness. This inventory measured concepts which were developed throughout the Career Awareness program. Specifically, the CMI measured the following five variables:

1. Decisiveness in career decision-making.
 2. Involvement in career decision-making.
 3. Independence in career decision-making.
 4. Orientation to career decision-making.
 5. Compromise in career decision-making.
- (Crites, 1978b, p. 10)

In addition, the CMI provided norms groups comparable to the population being studied.

The reliability of the CMI was another factor in its selection. Crites (1978b) addressed three aspects of reliability of his inventory: (1) the internal consistency coefficient of the Screening Form A-2 for ninth grade students was .74. The mean for grades six through twelve

12
inclusive was .74; (2) the stability coefficient, r , being .74, was established by test-retest over a one year period for Grades six through twelve inclusive. Although the internal consistency was not as high as that of other tests, Crites pointed out that this instrument was designed to measure a group of related, not identical career attitudes. Crites reported that the stability coefficient for test-retest was relatively low, however, when Heises' procedure was implemented the stability coefficient increased to .82, which was significant at the .01 level of confidence; (3) there existed no coefficients of equivalence (since the equivalent forms had not been developed (Crites, 1978b, pp.12-13).

With respect to the validity of the CMI, Crites (1978b) cited the research of others (Hollender, 1964; Carek, 1965; Shirts, 1968; Sharaf, 1968; Walsh and Osipow, 1973) and reported his own. Crites assessed the content validity by asking a panel of 10 experts to indicate the more mature response for each of the items on the test. Crites obtained a 74 per cent agreement which he termed as being acceptable. To establish the criterion related validity and construct validity, Crites cited other studies (Randolph and Grantham, 1963; Carek, 1968; Sharaf, 1968; Shirts, 1968). In essence these studies confirmed and supported the criterion related validity and construct validity (Crites, 1978b).

An additional requirement for the instrument used in this study was that the instrument had to be relatively easy to administer. Since teachers in the classroom would have to administer the inventory to the students, this criterion was essential. The format and clear directions of the standardized administration of the CMI were considered when selecting the instrument used in this study.

In addition to the CMI, the participating schools were sent a follow-up letter and evaluation form (see Appendix G) after the program had been administered. The purpose of this evaluation form was to assess the teacher's reaction to the Career Awareness program.

Analysis of the Data

The CMI was administered to the students by their teacher. All students in the pre-test and post-test groups received the pre-test, whereas only those who participated in all four sessions received the post-test. In the post-test only group, only those students who participated in all four sessions of the program were administered the CMI. The tests were hand-scored by using the scoring key provided by the publishers of the CMI.

Analysis of the data was accomplished by utilizing the computer program "Statistical Package for Social Sciences." To answer the four research questions, t-tests were conducted. T-tests were used to test the null hypothesis of the questions which were that no significant differences existed. The four research questions were:

1. Are there any significant differences between the pre-test scores and the post-test scores as measured by the CMI?
2. Are there any significant differences between the scores of the post-test only group and the post-test scores of the pre-test and post-test group as measured by the CMI?
3. Are there any significant differences between the post-test scores of the group participating in the program in February and the group participating in the program in March as measured by the CMI?

4. Does a significant relationship exist between the post-test scores of the participants in schools with a part-time counsellor and schools with no counsellor as measured by the CMI?

All t-tests were tested for significance at the .05 level.

Analysis of the data provided by the teacher evaluation form was done by hand using descriptive statistics.

Organization of the Remainder of the Study

Chapter IV contains the analysis of the data collected in the study with respect to the above research questions. Chapter V contains a summary of the results, interpretations and recommendations for further research.

CHAPTER IV

FINDINGS OF THE STUDY

The purpose of this study was to develop, implement and evaluate a short-term Career Awareness program. Presented in Chapter IV is the analysis of the data collected in this study. The data consisted of responses of 206 ninth grade students to the Career Maturity Inventory (CMI), Attitude Scale A-2, and 11 teacher responses to the Career Awareness evaluation form. The analysis of the data is presented in the following manner: (a) explanation regarding the lack of data collected from two schools in the study is presented; (b) each research question stated in Chapter I is restated; (c) each research question is answered by analysis of the CMI; and (d) each question on the Career Awareness evaluation form is analyzed by descriptive statistics.

Of the 12 schools selected to participate in this study, data were collected from 10 schools, and no data were collected from two schools. Of the two schools from which no data were collected, one school administered the program and the post-test to the students. However, the student answer sheets to the CMI were inadvertently destroyed by school personnel. The Career Awareness program was administered in this school in March, 1979, to 26 ninth grade students; the school did not have a counsellor. In the second school from which no data were collected, the Career Awareness program and the pre-test and post-test were not administered to the 36 ninth grade students. A teacher at this school stated that the program was not administered because the

expectations of the student work sheets were unclear. The program was scheduled to be administered in this school in March; the school had a part-time counsellor.

Of the 10 schools where the program was administered and the results of the answer sheets of the CMI analyzed, six administered the program in February, 1979, while four administered the program in March, 1979. Five of the schools had a part-time counsellor while the other five schools had no counsellor.

The analysis of the data is presented by restating each question as presented in Chapter I and then answering each question by the analysis.

Research Question 1. Are there any significant differences between the pre-test scores and the post-test scores as measured by the Career Maturity Inventory (CMI)?

The results of the analysis of variance of the CMI for five schools in which students were administered the pre-test and the post-test are reported in Table 1.

TABLE 1

T-TEST IN PRE-TEST AND POST-TEST SCORES OF THE CMI
FOR STUDENTS ADMINISTERED BOTH TESTS

Test	Number of Schools	Number of Students	Mean	Standard Deviation	T
Pre-test	5	91	30.330	4.954	-3.09**
Post-test	5	91	31.2088	4.748	

*Significant beyond the .05 level of probability.

**Significant beyond the .01 level of probability.

The results of the analysis of variance of mean scores of five schools in which pre-tests and post-tests were administered were significant beyond the .01 level; therefore, there was a significant difference between the mean pre-test and post-test scores of students who were administered both the pre-test and the post-test, as measured by the CMI.

The results of the analysis of variance of the CMI scores for all 10 schools, five schools in which students were administered the pre-test and five schools in which the students were administered the post-test only, are presented in Table 2.

TABLE 2
T-TEST IN PRE-TEST AND POST-TEST ONLY SCORES OF THE CMI

Test	Number of Schools	Number of Students	Mean	Standard Deviation	T
Pre-test	5	98	30.5714	4.218	-0.77
Post-test only	5	108	30.0833	4.863	

*Significant beyond the .05 level of probability.

**Significant beyond the .01 level of probability.

The results of the analysis of variance of mean scores for the five schools in which students were administered the pre-test and five schools in which the students were administered the post-test only was not significant beyond the .05 level. No significant difference exists between the mean scores of the pre-test groups and the mean scores of the post-test only groups. A comparison of the means of both groups indicated the mean for the pre-test group was 0.4881 greater

than the mean for the post-test only group.

The results of the analysis of variance of the CMI for the pre-test scores of students from five schools and the post-test scores of students from all 10 schools are reported in Table 3.

TABLE 3
T-TEST IN PRE-TEST AND POST-TEST SCORES OF THE
CMI FOR ALL GROUPS

Test	Number of Schools	Number of Students	Mean	Standard Deviation	T
Pre-test	5	98	30.5714	4.218	0.17
Post-test	10	189	30.878	4.481	

*Significant beyond the .05 level of probability.

**Significant beyond the .01 level of probability.

The results of analysis of variance of mean scores for students from all 10 schools was not significant beyond the .05 level; therefore, a significant relationship does not exist between the mean scores of the pre-test groups and the mean scores of the post-test groups.

In summary, a significant difference did exist between the pre-test and post-test mean scores of the five schools in which both tests were administered. The analysis of variance did not indicate a significant relationship between the mean scores of the pre-test groups and post-test only groups. The analysis of variance also did not indicate a significant relationship between the mean scores of the five pre-test groups and the mean scores of all 10 post-test groups. These results suggested that the significant differences between the pre-test and post-test mean scores of the five schools in which both

tests were administered may be a result of the administration of the pre-test and not a result of the program.

A summary of the number of students, mean, and standard deviation of each pre-test and post-test is reported in Table A (see Appendix H).

Research Question 2. Are there any significant differences between the scores of the post-test only group and the post-test scores of the pre-test and post-test group as measured by the Career Maturity Inventory?

The results of the analysis of variance of the CMI for the post-test scores of all 10 schools are reported in Table 4.

TABLE 4
T-TEST IN POST-TEST SCORES OF THE CMI FOR POST-TEST ONLY
GROUPS AND PRE-TEST AND POST-TEST GROUPS

Group	Number of Schools	Number of Students	Mean	Standard Deviation	T
Post-test only	5	98	30.5714	4.218	.97
Pre-test and post-test	5	91	31.2088	4.748	

*Significant beyond the .05 level of probability.

**Significant beyond the .01 level of probability.

The results of the analysis of variance of the CMI was not significant beyond the .05 level of significance; therefore, there was no significant difference between the mean scores of the post-tests in the post-test only groups and the pre-test and post-test groups, as measured by the CMI.

Research Question 3. Are there any significant differences between the post-test scores of the group participating in the program in February and the group participating in the program in March as measured by the Career Maturity Inventory?

To determine if any significant differences existed between the post-test scores of the groups administered the test in February and March, a t-test was conducted on the mean scores of the CMI. The results of the analysis of variance is reported in Table 5.

TABLE 5

T-TEST IN POST-TEST SCORES OF THE CMI FOR SCHOOLS
PARTICIPATING IN THE CAREER AWARENESS PROGRAM
IN FEBRUARY AND MARCH

Month	Number of Schools	Number of Students	Mean	Standard Deviation	T
February	6	120	30.825	4.576	-0.22
March	4	69	30.971	4.342	

*Significant beyond the .05 level of probability.

**Significant beyond the .01 level of probability.

The results of the analysis of variance of the mean scores of the CMI for all 10 schools was not significant at the .05 level; therefore, no significant difference exists between the mean scores of the post-tests which were administered in February and March, as measured by the CMI. The results indicated that history and maturation did not influence the means of the post-test scores on the CMI.

Research Question 4: Does a significant relationship exist between the post-test scores of the participants in schools with part-time counsellors and schools with no counsellors, as measured by the Career Maturity Inventory?

The results of the analysis of variance of the mean scores of the CMI for all 10 schools are reported in Table 6.

TABLE 6

T-TEST IN POST-TEST SCORES OF THE CMI FOR SCHOOLS
WITH PART-TIME COUNSELLORS AND SCHOOLS
WITH NO COUNSELLORS

School	Number of Schools	Number of Students	Mean	Standard Deviation	T
Part-time counsellor	5	118	31.0678	4.576	0.75
No counsellor	5	71	30.5634	4.332	

*Significant beyond the .05 level of probability.

**Significant beyond the .01 level of probability.

The results of the analysis of variance of the mean scores of the CMI for all 10 schools was not significant at the .05 level, therefore, there was no significant difference between the mean scores of the post-tests in schools with part-time counsellors and schools with no counsellors, as measured by the CMI.

Analysis of the Evaluation Form

Of the 11 schools which administered the Career Awareness program to their ninth grade students, 11 evaluation forms (see Appendix G) were returned. The analysis of the data provided by the

evaluation forms is reported in terms of the number and per cent of respondents to each question.

1. Rate each session with respect to the audio portion of the Career Awareness program. Put a check in the appropriate box.

The results of the analysis of the data for the 11 respondents are reported in Table 7.

TABLE 7
EVALUATION OF THE AUDIO PORTION OF THE CAREER AWARENESS
PROGRAM BY THE TEACHER

	Ineffective	Minimally Effective	Effective	Very Effective
Session 1 - "What is Career Awareness"			9 (81%)	2 (18%)
Session 2 - "Self-Exploration"			8 (72%)	3 (27%)
Session 3 - "Decision-making"		3 (27%)	7 (63%)	1 (9%)
Session 4 - "Careers"			9 (81%)	2 (18%)

The results of the analysis of data for the audio portion of the Career Awareness program indicated that the teachers felt the program was effective. The first session--"What is Career Awareness"--was rated as effective by 9 (81%) and very effective by 2 (18%) of the respondents. The second session--"Self-Exploration"--was rated as effective by 8 (72%) and very effective by 3 (27%) of the respondents. The third session--"Decision-making"--was rated as minimally effective by 3 (27%), effective by 7 (63%), and very effective by 1 (9%) of the

respondents. The fourth session--"Careers"--was rated by 9 (81%) as effective and 2 (18%) as very effective by the respondents.

2. Rate each session with respect to the visual portion of the Career Awareness program. Put a check in the appropriate box.

The results of the analysis of the data for the 11 respondents are reported in Table 8.

TABLE 8
EVALUATION OF THE VISUAL PORTION OF THE CAREER
AWARENESS PROGRAM BY THE TEACHER

	Ineffective	Minimally Effective	Effective	Very Effective
Session 1 - "What is Career Awareness"		2 (18%)	7 (63%)	2 (18%)
Session 2 - "Self-Exploration"		2 (18%)	7 (63%)	2 (18%)
Session 3 "Decision-making"	1 (9%)	2 (18%)	7 (63%)	1 (9%)
Session 4 - "Careers"		2 (18%)	6 (54%)	3 (27%)

The results of the analysis of the data for the visual portion of the Career Awareness program indicated that the teachers felt the program was effective. The first session--"What is Career Awareness"--was rated as minimally effective by 2 (18%), effective by 7 (63%), and very effective by 2 (18%) of the respondents. The second session--"Self-Exploration"--was rated as minimally effective by 2 (18%), effective by 7 (63%), and very effective by 2 (18%) of the respondents. The third session--"Decision-making"--was rated as ineffective by 1 (9%),

minimally effective by 2 (18%), effective by 7 (63%), and very effective by 1 (9%) of the respondents. The fourth session--"Careers"--was rated as minimally effective by 2 (18%), effective by 6 (54%), and very effective by 3 (27%) of the respondents.

3. Would you be interested in ordering the Career Awareness program next year for the benefit of your ninth grade students?

All of the respondents indicated they would be interested in ordering the Career Awareness program next year.

4. According to your ninth grade students' reactions and comments about the program, how do you feel your students would rate the program?

The results of the analysis of the data for the 11 respondents are reported in Table 9.

TABLE 9

EVALUATION OF THE CAREER AWARENESS PROGRAM BY THE
TEACHER IN TERMS OF THE PARTICIPATING
STUDENTS' REACTION

Ineffective	Minimally Effective	Effective	Very Effective
0	1 (9%)	9 (81%)	1 (9%)

The results of the analysis of the data for the 11 respondents indicated that 1 (9%) felt the program was minimally effective, 9 (81%) felt the program was effective, and 1 (9%) felt the program was very effective in terms of the students' assessment of the program.

5. What are your suggestions for further improvement of the Career Awareness program?

Comments about the program were received from 9 (81%) of the respondents. Several of the respondents indicated that the directions for the student work sheet in Session 3--"Decision-making"--seemed to cause confusion among some of the students. A number of respondents indicated that the answers to the student work sheets, which were read from the screen, were not clear enough to read at a distance in Session 4. The respondents reported that the content was appropriate and beneficial to the ninth grade student. Two of the respondents expressed that the program should be lengthened and more career descriptions added. This, they felt, would give the students a broader view of the world of work and knowledge of different careers. One respondent indicated that academic assignments should be encouraged to follow up the Career Awareness program.

Summary

Chapter IV contained an analysis of the data collected in the study. The data consisted of 206 responses of ninth grade students to the CMI, Attitude Scale A-2, and 11 teacher responses to the Career Awareness evaluation form.

Four research questions were stated and the results of the analysis of the data was reported for each question. The four research questions received negative results. Of the five questions on the evaluation form, the majority of responses were positive.

The first research question was concerned with evaluating any significant differences between the pre-test and post-test. The results of the analysis of variance indicated that no significant differences existed between the mean scores of the pre-test and the

post-test only groups and the mean scores of the pre-test and all the post-tests combined. A significant difference did exist between the mean scores of the pre-tests and post-tests which were administered to the same group. These results suggested that the significant relationship which existed between the mean scores of the pre-tests and post-tests was a result of the administration of the pre-test and not a result of the administration of the Career Awareness program.

The second research question was addressed to significant differences between the mean scores of the post-tests in the pre-test and post-test group and the post-test only group. The results of the analysis of variance indicated no significant differences.

The third research question was concerned with the effect history and maturation had on the groups who were administered the Career Awareness program in February and March. The analysis of variance revealed no significant differences between the mean scores of the two groups.

The fourth research question asked if any significant differences existed between the mean scores of students in a school with a part-time counsellor and a school with no counsellor. No significant differences were found to exist.

The first two questions on the evaluation form were addressed to the effectiveness of the audio and visual portions of the Career Awareness program. The majority of respondents rated both audio and visual portions as being effective.

The third question asked if the respondents would be interested in ordering the program next year. All respondents responded

affirmatively.

The respondents were asked in question four to rate how they felt their students would evaluate the program. Nine of the 11 respondents rated the program as effective while one rated the program as minimally effective and one rated the program as very effective.

The fifth question asked for suggestions and comments for improvement of the Career Awareness program. Criticisms were directed toward the areas of clarity of slides and confusion of directions. The content of the program received approval from the majority of the respondents.

The analysis of the results of the research questions indicated that the implementation of a short-term Career Awareness program did not have a significant effect on the career maturity of the ninth grade students studied, as measured by the CMI. There was no significant difference of the career maturity of ninth grade students between those who attended schools with a part-time counsellor and with no counsellor. The analysis of the data of the evaluation form indicated that teachers felt the program was effective.

CHAPTER V

SUMMARY, INTERPRETATIONS AND RECOMMENDATIONS

In Chapter V a summary of the complete study is presented. The contents of the chapter include a restatement of the problem, a summary of the procedure, an overview of the method of analysis of the data, a restatement of the research questions, and specific findings and recommendations for further studies.

Restatement of the Problem

Career education programs have been developed and implemented in schools throughout the entire school system in both Canada and the United States. In Newfoundland and Labrador a comprehensive career education program has not been designed and implemented for schools or grades in the Newfoundland school system. Many rural schools lack even the services of a full-time counsellor who could provide students with career counselling and career information.

The purpose of this study was to develop, implement, and evaluate a short-term Career Awareness program. The Career Awareness program was an audio-visual presentation designed such that it could be administered to students by untrained personnel in a short time period so the classroom schedule would not be disrupted. The program consisted of four filmstrips with accompanying cassette tapes, student work sheets and a teacher manual.

The Career Awareness program was implemented in 12 schools throughout the rural areas of Newfoundland during a six-week period in February and March, 1979. The entire program was administered to students in four sessions, each session being approximately one class period (30 minutes) in length.

The evaluation of this study consisted in part of pre-tests and post-tests of the Career Maturity Inventory (CMI) administered to students in one-half the schools and a post-test only administered to the remaining students. In addition, teachers who administered the Career Awareness program in the schools, evaluated the program by completing a short questionnaire. Specifically, the evaluation of the program attempted to answer two questions:

1. Does a short-term Career Awareness program change the career maturity of ninth grade students in rural Newfoundland?
2. Is there any significant difference of career maturity of ninth grade students attending schools with part-time counsellors compared to schools with no counsellor?

Summary of the Procedures

Twelve schools, six with part-time counsellors and six with no counsellor, were randomly selected as the sample. During the last week of January and February, six schools were mailed the program packet. In each group of six schools, one-half were to administer the pre-test and post-test, and the remaining schools to administer the post-test only. Each program packet contained the following materials: (1) one student work sheet per session per student; (2) one Career Maturity Inventory per student with accompanying answer sheets; (3) an Administration and

Use Manual (Crites, 1978a) for the CMI; (4) a Career Awareness-Teacher Manual; (5) four filmstrips--one of each session; (6) two cassette tapes with two sessions recorded on each; (7) return label and postage; and (8) a cover letter. A follow-up teacher evaluation form for the Career Awareness program was mailed to each of the participating schools during the second week of March, 1979.

The 12 rural schools participating in the study met the following criteria:

1. No full-time counsellor.
2. No comprehensive career education program implemented in the school within the past 10 years.
3. Located at least 50 miles from town with a population greater than 20,000.
4. Located in a community having a population not greater than 3,000 people.

Method of Analysis

All inventories were hand scored with the use of an answer key provided by the publishers of the CMI. The t-test was used to determine the effect of a pre-test on the post-test, the effect of history and maturation on two sets of results, the difference between schools with a part-time counsellor and schools with no counsellor, and the change in career maturity before and after participation in the program.

Research Questions and Specific Findings

Four research questions were examined in the study. Each research question is restated and findings are reported.

1. Are there any significant differences between the pre-test scores and the post-test scores as measured by the Career Maturity Inventory (CMI)?

Analysis of the results of the CMI indicated a significant difference between the mean pre-test and post-test scores of students who were administered both tests. Significant differences were not found to exist between pre-test and post-test only groups, and the pre-test and all the post-tests combined. These results indicated that the significant relationship which existed between the pre-test and post-test groups who were administered both tests may be a result of the administration of the pre-test and not a result of the administration of the program.

2. Are there any significant differences between the scores of the post-test only groups and the post-test scores of the pre-test and post-test group as measured by the Career Maturity Inventory (CMI)?

The results of the CMI revealed no significant differences when a t-test was conducted on the post-test scores of the post-test only group and the pre-test/post-test group.

3. Are there any significant differences between the post-test scores of the group participating in the program in February and the group participating in the program in March as measured by the Career Maturity Inventory (CMI)?

The analysis of variance of the results of the CMI indicated no significant differences between the mean scores of the group participating in the program in February and the group participating in the program in March.

4. Does a significant relationship exist between the post-test scores of the participants in schools with part-time counsellors and schools^o with no counsellor as measured by the Career Maturity Inventory (CMI)?

The analysis of variance of the results of the CMI indicated no significant differences between the mean post-test scores of students who had a part-time counsellor at their school and students with no school counsellor.

Interpretation and Implications of Study Findings

The findings of this study are addressed in two manners. First, in terms of previous research on short-term career education programs and, secondly, in terms of implications for further research.

Interpretation in terms of previous research. The findings of this study are supported by the results of previous studies. In a study by Swails and Herr (1976) a seven-hour career education program was administered to a group of ninth grade students. An analysis of the data indicated that no significant differences existed between any of the groups which participated in the study. The measurement instrument employed in the study of Swails and Herr was the Vocational Development Inventory (VDI). The VDI was later renamed the Career Maturity Inventory. Randolph and Grantham (1973) conducted a study on the effect an eight-hour career education program had on fifth and sixth grade students when taught by classroom behavior management techniques. The analysis of the data of the VDI indicated that although significant differences did exist between the classroom behavior management group and the other groups,

the control group, who did not receive career education, scored significantly higher than the traditional group, who received the career education program. Thus, both studies, one in which the participants were of the same age group as in this study, failed to produce any significant results with respect to the administration of short-term career education programs via traditional teaching methods. Both studies employed similar measurement instruments used in the present study.

The results of other studies provide findings which contradict the findings of the present study. Feldman and Marinelli (1975) conducted a six-session occupation exploration program with prison inmates. Significant differences were found between the group who participated in the program and the non-participating control group. The results of studies by Goodson (1969), Clapsaddle (1973), and Kershner and Blair (1975) were similar to those of Feldman and Marinelli (1975). All studies mentioned employed the CMI as the measurement instrument.

Implications for further research. The results of the present study have various implications for further research. First, the effectiveness of short-term career education programs was an unanswered problem.

The study demonstrated that there were no significant differences in career maturity as measured by the CMI. However, results of the analysis of the data obtained from the evaluation forms submitted by the teachers administering the Career Awareness program indicated that the teachers: (1) considered the program components effective; (2) would use the program with ninth grade students again; and (3) felt that their students would rate the program as effective.

Students in all grades of all schools are entitled to the benefits of career education. Since in the Newfoundland and Labrador school curriculum, career education as a standard course is not offered, students should be given the opportunity to participate in activities which relate to career education.

The results of analysis of the data in this study were conflicting. Further research should be conducted to assess the value of short- and long-term career education programs.

A second area for research concerns the usefulness of the CMI as an evaluation instrument of short-term programs. Positive results have been obtained using the CMI as the measurement instrument for long-term career education courses (Omvig, 1974; Kershner and Blair, 1975). Results of studies which employed the CMI as the measurement instrument for short-term career education programs are contradictory (Clapsaddle, 1973; Randolph and Grantham, 1973; Feldman and Marinelli, 1975; Swails and Herr, 1976). Crites (1978b) stated that the CMI was developed partially on the assumption that career maturity was developmental in nature. Taking into consideration this assumption, the contradictory evidence presented regarding the assessment of short-term career education programs using the CMI, and the results of this study, further research should be conducted regarding the development of an instrument specifically designed to assess short-term career education programs.

In this study no significant differences were found between the mean scores of students attending schools with a part-time counsellor and schools with no counsellor. This would indicate a need for further research to investigate the duties of part-time counsellors.

Recommendations for Further Research

The following recommendations are made for further research:

1. A revised edition of the Career Awareness program should be tested. In the revised edition, teacher suggestions and recommendations should be implemented--specifically, (a) the instructions in the third session for the student work sheet should be either clarified or simplified; (b) answers to the student work sheets in the fourth session should be printed on paper since some students experienced difficulty reading the answers on the screen; and (c) more careers should be described.
2. This study should be repeated using a measurement instrument specifically designed to measure the effectiveness of the Career Awareness program or its revised edition.
3. In order to increase the generalizability of this study, this study should be repeated in other areas of Newfoundland and Labrador, including schools in urban areas and schools with full-time counsellors.
4. Research should be conducted on the services part-time counsellors provide to schools. Services which are and are not provided and the reasons for each should be examined. This would help to determine, among other things, why a significant difference did not exist between schools with part-time counsellors and schools with no counsellor in this present study.
5. A study should be conducted on the development, implementation and evaluation of a comprehensive career education course suitable for all schools and grades in the Newfoundland and Labrador school system.

BIBLIOGRAPHY

- Bedal, C.A., & Manual, P.A. Career guidance in the Canadian mosaic. Vocational Guidance Quarterly, 1975, 24, 344-348.
- Bennkoph, S. Developing a needs based guidance system. Measurement and Evaluation in Guidance, 1975, 8, 180-186.
- Bordin, E.S. Psychological Counselling. New York: Appleton-Century-Crofts, 1968.
- Bordin, E.S., Nachmann, B., & Segal, S.J. An articulated framework for vocational development. In H.J. Peters and J.G. Hansen (Eds.), Vocational Guidance and Career Development (2nd ed.). New York: Macmillan, 1971.
- Breton, R. Social and Academic Factors in the Career Decisions of Canadian Youth. Ottawa: Department of Manpower and Immigration, Information Canada, 1972.
- Briggs, L.D. Career Education in Programs for Teacher Education: Summary of National Career Education Workshop. Washington, D.C.: Institute of Education, 1975.
- Calhoun, C.C., & Finch, A.V. Vocational and Career Education. California: Wadsworth, 1976.
- Carek, R. The interrelations between social desirability, vocational maturity, vocational realism and vocational decision. (Unpublished Master's Thesis, University of Iowa, 1965). In J.O. Crites, Career Maturity Inventory--Theory and Research Handbook (2nd ed.). California: CTB/McGraw-Hill, 1978b.
- Clapsaddle, D.K. Career development and teacher inservice preparation. Elementary School Guidance and Counselling, 1973, 8, 92-97.
- Clements, I. Career Education and Vocational Education. Washington, D.C.: National Education Association, 1977.
- Crawford, H.R. Standards set for quality programs in vocational agriculture. American Vocational Journal, 1977, 52, 3133.
- Crites, J.O. Vocational Psychology. New York: McGraw-Hill, 1969.
- _____. Career Maturity Inventory--Administration and Use Manual (2nd ed.). California: CTB/McGraw-Hill, 1978a.
- _____. Career Maturity Inventory--Theory and Research Handbook (2nd ed.). California: CTB/McGraw-Hill, 1978b.
- Cross, W.C. A career guidance program for a small rural high school. Vocational Guidance Quarterly, 1970, 19, 146-150.

Diana, J.W. A study of the effects of a counselling and guidance program designed to foster career awareness in tenth grade students. (Unpublished Doctoral Dissertation, Indiana University, 1973). Dissertation Abstracts International, 1974, 34(A), 4735 (University Microfilms No. 74-02641).

Dictionary of Occupational Titles. Washington, D.C.: U.S. Department of Labor, 1977.

Directory of Newfoundland and Labrador Schools, 1976-77. Newfoundland: Department of Education, 1977.

Evans, R., Hoyt, K., & Mangum, G. Career Education in the Middle/Junior High School. Utah: Olympus, 1973.

Feldman, H.S., & Marinelli, R.P. Career planning for prison inmates. Vocational Guidance Quarterly, 1975, 23, 358-362.

Feltham, D.W. A new look at vocational counselling. Alberta Counsellor, 1974, 5, 63-71.

Gelatt, H.B., Varenhorst, B., & Carey, R. Deciding. New York: College Entrance Examination Board, 1972.

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

Gibbons, W.D., & Lohnes, P.R. Emerging Careers. New York: Teachers College Press, 1968.

Hackney, L.H., & Williams, C.E. Career Awareness Mini-Seminars: A Guide. Washington, D.C.: Department of Health, Education and Welfare, National Institute of Education, 1975.

Hansen, L.S., & Tennyson, W.W. A career management model for counsellor involvement. Personnel and Guidance Journal, 1974, 54, 638-645.

Hilverda, E., & Solcum, W. Vocational guidance through the curriculum in small rural school system. Vocational Guidance Quarterly, 1970, 19, 65-70.

Holland, J.L. Making Vocational Choices: A Theory of Careers. Englewood Cliffs, New Jersey: Prentice Hall, 1971.

Hollender, J.W. Interrelationships of vocational maturity, consistency, and realism of vocational choice, school grade and age in adolescence. (Unpublished Master's Thesis, University of Iowa, 1964). In J.O. Crites, Career Maturity Inventory--Theory and Research Handbook (2nd ed.). California: CTE/McGraw-Hill, 1978b.

- Kennedy, W. Guidance Counsellors 1978-1979. Unpublished Manuscript. Newfoundland: Department of Education, 1978.
- Kerlinger, F.W. Foundations of Behavioral Research (2nd ed.). New York: Holt, Rinehart and Winston, 1973.
- Kershner, K.M., & Blair, M.W. Summative evaluation of RBS career education program. Paper presented at the American Educational Research Association Convention, Washington, D.C., April, 1975.
- Kline, P. Psychology of Vocational Guidance. New York: John Wiley and Sons, 1975.
- Martin, M.Y. Advancing career education. American Education, 1972, 8, 25-30.
- McCarthy, M. Implementation and evaluation of a career guidance program for grade nine students in a rural Newfoundland school: an alternative to prevocational education. (Unpublished Master's Thesis, Memorial University of Newfoundland, 1976).
- Miceli, C. Minicourse on careers. Science Teacher, 1974, 41, 38.
- Omig, C. Effects of a Program of Career Education in Kentucky's Education Region XII. Lexington: Department of Vocational Education, University of Kentucky, 1974.
- Owen, C. Career Education Program for Hazard Region XIII--Final Report. Washington, D.C.: Department of Health, Education and Welfare, National Institute of Education, 1975.
- Peters, H.J., & Hanson, J.C. (Eds.). Vocational Guidance and Career Development (2nd ed.). New York: Macmillan, 1971.
- Pucinski, R.C. The nature of career education. In W.W. Turnbull (ed.), Conferences on Career Education. New Jersey: Educational Testing Services, 1972.
- Randolph, D.L., & Grantham, L.B. A behavior management approach versus a traditional approach to career education. Vocational Guidance Quarterly, 1973, 21, 293-297.
- Roe, A. Early determinants of vocational choice. In D.G. Zytowski (ed.), Vocational Behavior: Readings in Theory and Research. New York: Holt, Rinehart and Winson, 1968.
- Safran, C. Safran Students Interest Inventory--Counsellors Manual. Don Mills, Ontario: Thomas Nelson and Sons, 1976.
- Sartin, R. Youth unemployment: part problem, part symptom. American Vocational Journal, 1977, 52, 26-30.

- Sharaf, R.S. The influence of response set on a measure of vocational maturity. (Unpublished Manuscript, University of Iowa, 1968). In J.O. Crites Career Maturity Inventory--Theory and Research Handbook (2nd ed.). California: CTB/McGraw-Hill, 1978b.
- Shertzer, B., & Stone, S.C. Fundamentals of Guidance (3rd ed.). Boston: Houghton Mifflin, 1976.
- Shirts, R.G. Response style in vocational development inventory. (Unpublished Doctoral Dissertation, University of Utah, 1968). Dissertation Abstracts International, 1968, 29(B), 761. (University Microfilms No. 68-08636).
- Super, D.E. A theory of vocational development. American Psychologist, 1953, 8, 185-190.
- Super, D.C., & Overstreet, P.L. The Vocational Maturity of Ninth Grade Boys. New York: Teachers College, Columbia University, 1960.
- Swails, R.G., & Herr, E.L. Vocational development groups for ninth grade students. Vocational Guidance Quarterly, 1976, 24, 256-260.
- Turnbull, W.W. (ed.). Conferences on Career Education. Princeton, New Jersey: Educational Testing Services, 1972.
- Walsh, W.B., & Osipow, S.H. Career preferences, self-concept and vocational maturity. Research in Higher Education, 1973, 1, 287-295.
- Wircenski, J.L. Career aspirations of ninth and tenth grade students in the south western school district. (Unpublished Doctoral Dissertation, Ohio State University, 1972). Dissertation Abstracts International, 1972, 33(A), 610. (University Microfilms No. 72-27141).
- Zaccaria, J.S. Theories of Occupational Choice and Vocational Development. Boston: Houghton Mifflin, 1970.
- Zytowski, D.G. (ed.). Vocational Behavior: Readings in Theory and Research. New York: Holt, Rinehart and Winston, 1968.

APPENDIX A

MATERIAL FOR THE ASSESSMENT OF THE NEED OF A CAREER AWARENESS PROGRAM:

LETTER, FOLLOW-UP LETTER AND QUESTIONNAIRE



MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1B 3X8

Department of Educational Psychology
Faculty of Education



Telex: 016-4101
Telephone: (709) 753-1200

Ms. Nancy Wilson, a graduate student under my direction, is presently involved in research on career education for rural Newfoundland high schools. The end result of her research will be an audio-visual program on career awareness with accompanying student work sheets and teacher's manual. This program will be approximately 4 class periods long (2 hrs.) and is designed to be used by teachers who do not have any previous training in career education.

The areas we are investigating for inclusion in the above program are:

- (a) self-awareness
- (b) decision-making skills
- (c) meaning of work
- (d) relationship of work and leisure
- (e) occupational clusters information

Presently we are at the stage of identifying and assessing various student needs for the further development of this career awareness program for grades 9 and 10 students in rural schools. We would appreciate your help and cooperation in identifying these needs by completing the enclosed questionnaire. For your convenience, enclosed is a self-addressed, stamped envelope for the return of the questionnaire. Thank you very much.

Sincerely,

David S. Watts, Ed.D.
Professor of Education

DSW/kjd



MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1B 3X8

*Department of Educational Psychology
Faculty of Education*

Telex: 016-4101
Telephone: (709) 753-1200

On January 26, 1978 you were sent a letter and questionnaire regarding research on career education in rural Newfoundland. Unfortunately, when these letters were mailed, schools were in the process of examinations; thus, the questionnaire returns have been low. Enclosed is another copy of the questionnaire; it would be appreciated if you could complete it and return it in the self-addressed, stamped envelope provided.

Ms. Nancy Wilson, a graduate student under my direction, is presently involved in the above-mentioned research. The end result of her research will be an audio-visual program on career awareness for grade 9 and 10 students with accompanying student work sheets and teacher's manual. This program will be approximately 4 class periods long (2 hrs.) and is designed to be used by teachers who do not have any previous training in career education.

The enclosed questionnaire will enable us to identify and assess various student needs for the further development of this career awareness program. We would appreciate your help and cooperation in identifying these needs by completing the enclosed questionnaire. Thank you very much.

Sincerely,

David S. Watts, Ed.D.
Assistant Professor

DSW/kjd

Questionnaire - Career Awareness Program

Principal

School

School Board

1. Please circle a number from 1 to 5 in each of the following topics. The number circled indicates the order of importance as the topic applies to career awareness, 1 being most important, 5 being least important. These should be rated as you perceive the needs of your grade 9 and 10 students.

Greatest importance					Least importance	
1	2	3	4	5		Self-awareness--the students' own awareness of their interests and talents.
1	2	3	4	5		Decision-making skills--the students' ability to make decisions considering all alternatives.
1	2	3	4	5		Meaning of work--the students' perception of the value and meaning of work as a long term occupation.
1	2	3	4	5		Relationship of work to leisure--the students' perception of work versus leisure and how they can be partially integrated on the job.
1	2	3	4	5		Occupational clusters (career families) information--the students' awareness of information about general types of jobs.

2. What other topics would you consider important for inclusion in this program which would benefit the students? _____
3. Within the past 10 years, has there been to your knowledge a comprehensive career education program in your school?

_____ Yes _____ No

4. Do you feel there is a need for a career awareness program in your school such as the one discussed in the attached letter?

_____ Yes _____ No

5. Would you be willing to permit your grade 9 and/or 10 students to participate in the program described in the accompanying letter?

_____ Yes _____ No

6. Presently in your school, is there a guidance counsellor?

_____ full-time

_____ part-time

_____ none at all

7. Comments:

Thank you for your assistance. Please return to:

Dr. David S. Watts
Rm. E-328E
Faculty of Education
Memorial University of Newfoundland
St. John's, Newfoundland
A1B 3X8

APPENDIX B

CAREER AWARENESS PROGRAM ANNOUNCEMENT FOR SCHOOLS INTERESTED IN
PARTICIPATION IN THE STUDY: LETTER AND INFORMATION SHEET



MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1B 3X8

Department of Educational Psychology
Faculty of Education

Telex: 016-4101
Telephone: (709) 753-1200

In the last academic school year you were contacted about research on an audio-visual Career Awareness program for grade 9 students in rural Newfoundland. This program is now in the middle stages of development and is expected to be ready by February, 1979. The Career Awareness program is 4 class periods long, approximately 2 hours, and is divided into 4 sessions, each session 25-30 minutes long. The topics of each session in order are:

- General Career Awareness
- Self-Exploration
- Decision-Making Skills
- Careers

Although this program is designed to be used by teachers who do not have any previous training in career education, teacher participation and instruction is minimal; a teacher manual and student work sheets are included.

Since this program is part of research on career education in rural Newfoundland, evaluation of the above-mentioned program is necessary. The evaluation is as follows: half of the participating grade 9 students will be given a pre-test and post-test administered by the teacher just before and after the program, and the other half of the participating students will be given the post-test only. These tests consist of 50 true-false items, administration time is 25 minutes. The design of this program also requires that the test(s) and program be given in one week.

Last year you indicated that your school would be willing to permit your grade 9 students to participate in this program. Enclosed is an information sheet. If you are still interested in participating in this Career Awareness program, would you please fill in the enclosed sheet and return it to us. Thank you very much for your cooperation.

Sincerely,
Nancy Wilson, Graduate Student
Dr. D. Watts, Supervisor

Information Sheet

Principal

School

School Board

1. Please indicate if your school would be willing to participate in this program under the conditions stated in the cover letter.

_____ YES

_____ No

2. The following time periods have been allotted for administration of this program. Please indicate your first, second, third and fourth choices.

_____ Feb. 5-9, 1979

_____ Feb. 12-16, 1979

_____ Mar. 5-9, 1979

_____ Mar. 12-16, 1979

3. How many grade 9 students are presently enrolled at your school? _____

NOTE: The school needs to provide a filmstrip projector and cassette tape player in order to show the program.

PLEASE RETURN TO: Ms. Nancy Wilson
Box 18
Education Building
Memorial University of Newfoundland
St. John's, Newfoundland
A1B 3X8

APPENDIX C

INFORMATION TO SCHOOLS REGARDING THE ARRIVAL OF THE
CAREER AWARENESS PROGRAM: LETTER

Box 48, Education Bldg.,
Memorial University,
St. John's, Nfld.
A1B 3X8

January 17/79

Re: Career Awareness Program

In November, 1978, you received a letter regarding participation in a Career Awareness Program for your Grade IX students. This program is now available; it consists of four (4) separate sessions, each approximately a class period in length and a post-test to be administered to students after the program has been shown.

You have been selected to receive this program for the week of . As indicated on the previous letter, this program has been designed to be shown to students in a one-week time period.

The Program consists of four (4) filmstrips and cassette tapes to accompany the filmstrips. Since filmstrip projectors and cassette tape players are cumbersome to mail, the school is asked to provide these two pieces of equipment.

I trust that your Grade IX students will find this program to be an enjoyable learning experience.

Thank you for your co-operation.

Sincerely,

Nancy Wilson,
Graduate Student.

Box 48, Education Bldg.,
Memorial University,
St. John's, Nfld.
A1B 3X8

January 17/79

Re: Career Awareness Program

In November, 1978, you received a letter regarding participation in a Career Awareness Program for your Grade IX students. This program is now available; it consists of four (4) separate sessions, each approximately a class period in length, and a pre-test and a post-test to be administered to students before and after the program has been shown.

You have been selected to receive this program for the week of . . . As indicated on the previous letter, this program has been designed to be shown to students in a one-week time period.

The Program consists of four (4) filmstrips and cassette tapes to accompany the filmstrips. Since the filmstrip projectors and cassette tape players are cumbersome to mail, the school is asked to provide these two pieces of equipment.

I trust that your Grade IX students will find this program to be an enjoyable learning experience.

Thank you for your co-operation.

Sincerely,

Nancy Wilson,
Graduate Student.

APPENDIX D
STUDENT WORKSHEETS

STUDENT WORKSHEET - SESSION 1

PAGE 1

CAREER - TAXI DRIVER

WHERE - In a car or bus

WHEN (HOURS) - Irregular hours - May work day or night shifts

WHAT OTHER EMPLOYEES DO THEY WORK WITH - A taxi driver does not work with any other employees

AMOUNT OF TIME THEY WORK WITH PUBLIC - Works with the public all the time

TYPES OF MACHINES THEY WORK WITH - Cars or busses and two-way radios

EDUCATION NECESSARY - Grade 11 preferred

POSSIBLE ADVANCEMENT - May be promoted to head driver

SPECIAL ABILITIES OR REQUIREMENTS - Must have a special drivers licence

CAREER - SECRETARY

WHERE - In an office

WHEN (HOURS) - Regular hours (9-5); may work overtime

WHAT OTHER EMPLOYEES DO THEY WORK WITH - A secretary works with a lot of other employees - the boss, office personnel and others in the company

AMOUNT OF TIME THEY WORK WITH PUBLIC - Not too much - talk to public over phone and in person

TYPES OF MACHINES THEY WORK WITH - Typewriter, duplicating machine and others

EDUCATION NECESSARY - Certificate in Secretary Science or Typing preferred

POSSIBLE ADVANCEMENT - May be promoted to head secretary

SPECIAL ABILITIES OR REQUIREMENTS - Typing

STUDENT WORKSHEET - SESSION 1

PAGE 2

CAREER - TELEPHONE OPERATOR

WHERE - _____

WHEN (HOURS) - _____

WHAT OTHER EMPLOYEES DO THEY WORK WITH - _____

AMOUNT OF TIME THEY WORK WITH PUBLIC - _____

TYPES OF MACHINES THEY WORK WITH - _____

EDUCATION NECESSARY - _____

POSSIBLE ADVANCEMENT - _____

SPECIAL ABILITIES OR REQUIREMENTS - _____

CAREER - LINESMAN AND CABLE SPlicer

WHERE - _____

WHEN (HOURS) - _____

WHAT OTHER EMPLOYEES DO THEY WORK WITH - _____

AMOUNT OF TIME THEY WORK WITH PUBLIC - _____

TYPES OF MACHINES THEY WORK WITH - _____

EDUCATION NECESSARY - _____

POSSIBLE ADVANCEMENT - _____

SPECIAL ABILITIES OR REQUIREMENTS - _____

STUDENT WORKSHEET - SESSION 1

PAGE 3

INSTRUCTIONS:

Compare any two careers of your choice. Think very carefully about the two careers you choose to compare before you write anything.

CAREER - _____

WHERE - _____

WHEN (HOURS) - _____

WHAT OTHER EMPLOYEES DO THEY WORK WITH - _____

AMOUNT OF TIME THEY WORK WITH PUBLIC - _____

TYPES OF MACHINES THEY WORK WITH - _____

EDUCATION NECESSARY - _____

POSSIBLE ADVANCEMENT - _____

SPECIAL ABILITIES OR REQUIREMENTS - _____

CAREER - _____

WHERE - _____

WHEN (HOURS) - _____

WHAT OTHER EMPLOYEES DO THEY WORK WITH - _____

AMOUNT OF TIME THEY WORK WITH PUBLIC - _____

TYPES OF MACHINES THEY WORK WITH - _____

EDUCATION NECESSARY - _____

POSSIBLE ADVANCEMENT - _____

SPECIAL ABILITIES OR REQUIREMENTS - _____

STUDENT WORKSHEET - SESSION 2

PAGE 1

NOTES

Read each item in the list of interests and abilities. Then read the names of the 7 careers across the top. If one of these careers spends most of the time doing the item listed, then put a check in the box.

INTERESTS AND ABILITIES

Using muscles to move or carry things

Working with hands (not writing)

Persuading or convincing others

Discussing with others

Investigating

Studying (not school work)

Planning

Making decisions

Making schedules

Working as a team

Talking to the public

Working outside

Following instructions

Reading

Writing

Listening

Meeting deadlines

Working or being alone

Working with objects rather than people

	✓	Butcher
		Furniture
		Salesman
	✓	Fireman
		Pharmacist
		Steel Erector
		Teller
		Architect

STUDENT WORKSHEET - SESSION 2

PAGE 3

INSTRUCTIONS

First read the list of interests and abilities. Then put a check by the five (5) interests or abilities that you feel would be most important to you in a career, and put an 'x' beside the five (5) items that are least important to you in a career. After you have done this write why each one is important or not important to you on the line provided.

INTERESTS AND ABILITIES

_____	Working with hands	_____
_____	Using muscles to move or carry things	_____
_____	Coming up with ideas	_____
_____	Investigating	_____
_____	Planning	_____
_____	Making schedules	_____
_____	Making decisions	_____
_____	Following instructions	_____
_____	Meeting deadlines	_____
_____	Studying (not school work)	_____
_____	Reading	_____
_____	Writing	_____
_____	Listening	_____
_____	Talking to the public	_____
_____	Working as a team	_____
_____	Discussing with others	_____
_____	Persuading or convincing others	_____
_____	Working or being alone	_____
_____	Working with things rather than people	_____
_____	Working outside	_____
_____	Other:	_____
_____		_____
_____		_____

STUDENT WORKSHEET - SESSION 2

PAGE 4

ANSWER SHEET FOR THE EXERCISE ON PAGE 2

NOTE: Your answers may not be the same as the answers on this sheet. Do not worry about this because what you think "most of the time" is, someone else might think of it as being a different amount of time. This answer sheet should only be used as a guide. If you think some answers are right and they are not marked on this sheet, then talk to your teacher and friends to see if they agree with you too.

INTERESTS AND ABILITIES

Using muscles to move or carry things
 Working with hands (not writing)
 Persuading or convincing others
 Discussing with others
 Investigating
 Studying (not school work)
 Planning
 Making decisions
 Making schedules
 Working as a team
 Talking to the public
 Working outside
 Following instructions
 Reading
 Writing
 Listening
 Meeting deadlines
 Working or being alone
 Working with objects rather than people

	Butcher	Furniture Salesman	Fireman	Pharmacist	Steel Erector	Teller	Architect
Using muscles to move or carry things	✓		✓		✓		
Working with hands (not writing)	✓	✓	✓	✓	✓		
Persuading or convincing others		✓					
Discussing with others		✓					✓
Investigating							
Studying (not school work)				✓			✓
Planning						✓	
Making decisions						✓	
Making schedules							
Working as a team			✓		✓		
Talking to the public		✓		✓		✓	
Working outside			✓	✓	✓		
Following instructions			✓	✓	✓	✓	
Reading				✓			✓
Writing		✓				✓	✓
Listening		✓					
Meeting deadlines					✓		✓
Working or being alone							
Working with objects rather than people	✓				✓		

NOTES

HOW TO MAKE A DECISION

1. MAKE SURE YOU KNOW AND UNDERSTAND THE PROBLEM.
2. SEEK INFORMATION THAT IS RELATED TO THE DECISION AND IDENTIFY THE VARIOUS ALTERNATIVES OR CHOICES.
3. EVALUATE EACH ALTERNATIVE OR CHOICE; THINK ABOUT WHICH ALTERNATIVE WOULD BE BEST.
4. ONCE THE BEST ALTERNATIVE HAS BEEN CHOSEN, THEN PLAN HOW IT WILL BE PUT INTO ACTION.

REMEMBER - IN ORDER TO MAKE A DECISION ON SOMETHING YOU MUST HAVE AT LEAST TWO CHOICES OR ALTERNATIVES FROM WHICH YOU CHOOSE THE BEST ONE.

HEY STUDENT COME HERE

CAN YOU
ANSWER THESE
QUESTIONS ???

1. If you want to graduate from high school, do you know what the requirements are?
____ YES ____ NO
2. Do you know how to find out about teachers, how to meet the kids and join the activities you like? ____ YES ____ NO
3. If you know what kind of careers you like, do you know which courses or activities we offer to help you prepare for these careers?
____ YES ____ NO
4. If you want to go to Vocational School, Trades College or University, do you know which courses are needed?
____ YES ____ NO
5. If there are things you really enjoy doing, do you know if we offer any courses or activities which will let you do these things? ____ YES ____ NO

1. What does John already know that would help him answer the five questions? (Answer briefly in your own words).

2. What more does John need to know to help him decide what courses to take in order to graduate from high school?

3. What does John already know or need to find out to help him decide which courses to take?

4. What does John need to know about requirements for admission to Vocational or Trades School, Fisheries College or University before making any decisions about high school courses?

5. What does John need to know about the courses that might help him in a career?

6. Who or what can John turn to for help if he can not answer the questions or decide what to do?

SOURCES OF INFORMATION: PEOPLE TO TALK TO AND THINGS TO DO TO HELP YOU GET MORE INFORMATION.

<u>PEOPLE TO TALK TO:</u>	<u>THINGS TO READ:</u>	<u>THINGS TO DO:</u>	<u>THINGS TO THINK ABOUT:</u>
School counsellor	High school course descriptions.	Get a part-time job.	What you did last summer.
Friends	Calendars from:	Volunteer to do things around your community.	Activities you really enjoy.
Parents	Trades School	Join interesting clubs.	How much money you need.
Relatives	Fisheries College	Visit the Canada Manpower Center.	What you want to do in the future.
Teachers	Vocational Schools	Practice filling out job applications.	
	University		
	Books on careers.		
	Want ads in the newspaper.		

INSTRUCTIONS

Now you are going to help John get the information he needs in order to help choose which courses to take in high school. The numbers on the chart below indicate which piece of information you will select for John to receive to help him make a decision. You are to select the 3 pieces which you think are most important, and then circle the numbers on the chart. Then turn the page and read only the pieces of information you have selected--that is only read the numbers you selected on page 4. After you have read the 3 pieces of information, go to page 7 and answer the questions.

Sources of Information	Kinds of Information Received		
	Risks Involved	Short and Long Range Objectives	Plans he Might Follow
Things John might think about-- His own thoughts	1	2	3
Things John might read	4	5	6
Things John might do	7	8	9
People John might talk to	10	11	12

STUDENT WORKSHEET - SESSION 3

PAGE 5

PIECES OF INFORMATION THAT CAN HELP JOHN

-1-

"I do not want to risk getting poor grades in high school by taking too many hard courses. I am not afraid of taking a chance for something important. My grades have been average so far."

-2-

"I want to be eligible to go to University. However I want most to be eligible to become an engineer after I graduate."

-3-

"I can take a lot of hard courses which allows me only a few easy courses; or take a few hard courses and more easy ones; or take a lot of easy ones and still be eligible for University. I can take easy courses and still get a good grade. I can take hard courses which are more interesting but I will have a greater chance of not getting a good grade. I can delay making my decision but I do not like that. I can ask my parents and let them decide."

-4-

He reads that math and one science are needed by all students who wish to enter engineering, and that most engineers take high school physics and chemistry. In Trades School and University engineers do not have many choices in the courses they take.

-5-

He reads that students can go to the Colleges of Trades and Technology and take an engineering technology course, and then go to University or else go straight to University from high school. It may be helpful to have some basic experience in engineering before going into a University program.

-6-

He sees that he has at least three alternatives. The first alternative is to take all the math and science courses he can in high school. The second alternative is to take more courses in social studies so he is not without a background in social studies, which he will miss in Trades College and University. The third alternative is to wait until Trades College or University to specialize and use high school to gain experience (such as visiting an engineer at work) so that he is sure he wants to become an engineer.

-7-

John gets a job with a construction crew building a wharf. He finds the work very boring and wonders if he really wants to be an engineer. He then visits a civil engineer in the city whose job sounds a lot more interesting.

-8-

John's family uses some of the summer to visit the University and Trades College. John reads the catalogues and visits the Engineering Building. He goes to the cafeteria and talks to some engineering students. He likes the University best.

-9-

John phones an engineer that one of his friend's father knows. He wants to find out about the different types of engineers. The engineer he talks to arranges for him to visit a civil, mechanical, chemical, and electrical engineer. The electrical engineer's job seemed to be the most interesting so he asks the man's permission to work voluntarily at his office for the rest of the summer.

-10-

John talks to his math teacher about how well he is doing in math. The teacher says he is doing well but he is not the best. His science teacher encourages him to take more math. When he talks to the visiting counsellor he is advised to be sure he does not close his mind to careers other than engineering.

-11-

John's parents and he talk about how much money it would cost to go away and do engineering. His father offers to help him if he would get a part-time job. His parents feel he should get a job related to some kind of engineering.

-12-

John's parents and a few teachers meet with him to look over the alternatives. They carefully outline three different plans for high school: one very hard program with all the math and science courses; one medium program with math and some sciences and social studies; one easy program with the minimum of math and science. John is left to decide which plan he will take.

1. Now that you have read the 3 pieces of information you chose for John to receive, can you decide on what courses he should take in high school?

Your decision based on three pieces of information: _____

2. Are you satisfied with this decision? If not, keep adding pieces of information until you feel ready to make a satisfying decision. Then write down your decision. If you are satisfied with your decision in question 1, go to the next question (#3).

3. Which piece of information was most important to you in making this decision?

4. Do you think you had all the information you needed to make a decision?

5. What other information would you like to have?

6. Write down what you think John should do in:

Grade 10: _____

Grade 11: _____

7. Go back to page 1 of this worksheet and read the steps listed under "How to Make a Decision." Can you identify each step listed there for helping John find information from which he can make a decision?

Adapted from: Gelatt, H.B., Varenhorst, B., and Carey, R. Deciding.
College Entrance Examination Board, New York, 1972.

STUDENT WORKSHEET - SESSION 4

PAGE 1

- ECONOMIC** - Careers related to the business world. Example: salesman, manager, secretary and banker.
- TECHNICAL** - Careers in which person works with machines and tools. Example: mechanic, machine operator, printer and repairman.
- OUTDOORS** - Careers in which person prefers to work outdoors. Example: wildlife specialist, gardener, hunting and fishing guide, roofer and sports writer.
- SERVICE** - Careers that help people on a short term or immediate basis. Example: cook, weatherman, French translator, policeman/woman and hotel clerk.
- HUMANE** - Careers that help people on a long-term or continual basis. Example: teachers, social workers, doctors and ministers.
- ARTISTIC** - Careers in which person likes to create things using paint, print, music and other forms of communication. Example: photographer, interior designer, cartoonist and fashion designer.
- SCIENTIFIC** - Careers which involve working with formulae, equations and scientific equipment. Example: biologist, electronics technician, meat inspector and chemist.

From: Safran, C. Safran Student's Interest Inventory - Counsellor's Manual. Thomas Nelson and Sons (Canada) Ltd., 1976.

Career descriptions from: Dictionary of Occupational Titles. U.S. Department of Labor, 1977.

STUDENT WORKSHEET - SESSION 4

PAGE 2

ECONOMIC	TECHNICAL	OUTDOOR	SERVICE	HUMAN	ARTISTIC	SCIENTIFIC	CARPENTER	SCIENCE	MATHEMATICS	ART	COMMERCIAL & BUSINESS SUBJECTS	SOCIAL SCIENCES
							Constructs and repairs woodwork and equipment; works from blueprints, drawings or oral instruction.					
							SCHOOL COUNSELLOR	Counsels individuals and provides educational and vocational guidance for groups and individuals.				
							LOAN OFFICER	Examines, evaluates, authorizes or recommends approval of customer applications for loans.				
							COMMERCIAL ARTIST	Draws or paints illustrations for the media to explain the spoken or written word.				
							DRY CLEANER	Operates dry cleaning machine to clean clothes, drapes and other materials; must know about cleaning process, fabrics and colour.				
							ELECTRICAL TECHNICIAN	Applies knowledge of electricity to test and modify electrical machinery, equipment and circuits.				
							GAS STATION ATTENDANT	Serves customers, helps owner keep the gas station clean and in order.				

STUDENT WORKSHEET - SESSION 4

PAGE 3

ECONOMIC	TECHNICAL	OUTDOOR	SERVICE	HUMANE	ARTISTIC	SCIENTIFIC		SCIENCE	MATHEMATICS	ART	COMMERCIAL & BUSINESS SUBJECTS	SCIENCES
							POLICEMAN/ WOMAN	Patrols assigned beat on foot, motor-cycle or car to control traffic, prevent crime and disturbance of the peace, and arrests people who break the law.				
							WELDER	Holds together metal parts of things like pipelines, cars and boilers, as specified by plans, diagrams or oral instructions.				
							SURVEYOR	Takes exact measurements of the earth's surface to determine precise location of hills and valleys for construction, map making and other purposes.				
							NEWS PHOTOGRAPHER	Photographs events, locations, people and other material for use in books, papers and television.				
							NURSE	Gives nursing care to patients in hospital, sanatorium or other similar institutions.				
							GENERAL OFFICE CLERK	Compiles and maintains records of business transactions and office activities, according to a system or procedure.				
							DAIRY FARMER	Raises dairy cattle for sale of products such as milk and cream.				

STUDENT WORKSHEET - SESSION 4

PAGE 4

ECONOMIC	TECHNICAL	OUTDOOR	SERVICE	HUMANE	ARTISTIC	SCIENTIFIC		SCIENCE	MATHEMATICS	ART	COMMERICAL	BUSINESS	SUBJECTS	SOCIAL	SCIENCES
							INTERIOR DECORATOR	Makes plans and designs, and furnishes the interior of homes and buildings.							
							BUYER	Purchases merchandise for resale.							
							TRAVEL AGENT	Plans, schedules and arranges accommodations and other travel services for customers of a travel agency.	✓						
							STEVEDORE	Loads and unloads ship's cargo.							
							DIEITITIAN	Plans and directs preparation and service of diets, as prescribed by a doctor.							
							SOCIAL WORKER	Helps individuals and families requiring social service assistance.							
							TRUCK DRIVER	Drives truck to transport materials to a specified location.							

APPENDIX E
CAREER AWARENESS TEACHER MANUAL

Career Awareness Teacher Manual

Introduction

This Career Awareness Program has been developed to help the student become more aware of the process of choosing a type of career. Focus has been placed on various aspects of choosing careers rather than on the choice of one particular career. The student who plans post-secondary education before entering the work force, as well as the student who plans to work immediately upon completion of high school, will find this program of aid to him. Thus, it is a general program aimed at helping all students who face, in the near future, a decision related to careers.

The Career Awareness Program is designed to be self-contained. That is, teacher input is minimal. Although a teacher must attend each of the four sessions to help those students who do not understand the exercises, actual instruction is not a part of this program.

The sessions are independent of each other, so that if a student misses one session, he will be able to understand without any difficulty the next session. The content of each is aimed at helping the student become more aware of how jobs differ and how the student can begin to look at different careers as they relate to himself.

Brief Description of Each Session

Session 1 - "What is Career Awareness?" deals with attitudes related to work. The student exercises are comprised of the comparison of a few careers.

- Session 2 - "Self-Exploration" addresses itself to the interests and abilities required by selected careers. The student must then choose which interests and abilities he feels are most and least important to him in an occupational sense.
- Session 3 - "Decision-making" focuses on how to make a decision. The student is involved in seeking information for and helping a character, named John, with his problem.
- Session 4 - "Careers" describes various careers. In this exercise, the student must indicate to which career cluster a given career belongs and which school subjects would be most helpful to the person who plans on entering the particular career.

The Teacher's Role

The teacher's role, as mentioned before, is minimal. Since student-teacher interaction is bound to occur, the teacher should help the student explore various kinds of careers rather than one particular career. The teacher should also encourage the student to think about things he likes to do--the student's own interests and abilities. This sometimes helps the student decide upon various types of careers. Since the purpose of this program is not to give specific information about careers and further education, the students should be urged, through writing letters to institutions, to seek further information. Finally, the teacher is urged to encourage both male and female students to gather information about careers which may have traditionally been sex stereotyped.

Description of Sessions

Session 1 - "What is Career Awareness?"

The purpose of this session is to help the student understand various factors he must consider when choosing a type of career, and also to help him realize how careers differ. Session 1 opens with a conversation between a student and school counsellor, who discuss various attitudes towards careers and working, in general. The conversation leads to a discussion of factors which must be considered when choosing a career. Interest, amount of education, job markets, travel and ability are the factors discussed. This selection of factors is not meant to be exhaustive. The counsellor and student then talk about how careers differ. The careers of secretary and taxi driver are discussed. A two-minute break then follows in which the student reads the comparison of these two careers on page 1 of the student work-sheet. After this break, the student and counsellor discuss the careers of telephone operator and lineman/cablesplicer. The student must then compare these two careers on page 2 of the work-sheet. The final exercise in this session requires the student to compare any two careers of his choice.

The session will help the student grasp the idea that careers differ in many ways. Since choosing a type of career may be a major decision in life, the student will be able to consider the various important factors regarding careers that are presented here. From this session, the student will realize that choosing a career or type of career requires serious thought.

Session 2 - "Self-Exploration"

This session will help the student explore his own interests and abilities with respect to careers. The session opens with brief descriptions of seven careers--butcher, furniture salesman, fireman, pharmacist, steel erector, teller and architect. The student must then complete the exercise on page 2 of the worksheet. This exercise consists of a list of interests and abilities on the left-hand side of the page with the names of the seven careers across the top. The student must check off which interests and abilities the seven careers involve "most of." An answer sheet is provided with this exercise, but this answer sheet should be used only as a guide, since many of the answers are subjective and the actual work involved in each career may vary from setting to setting. The last exercise helps the student think about his own interests and abilities. This exercise consists of the same list of interests and abilities as in the previous exercise, but in a different order. The student must put a check (✓) beside each of the five interests and abilities which he considers most important, and an 'X' beside each of the five least important to him in a career. The student must then write in why a particular interest or ability is or is not important to him.

This session will help the student realize that because of their various interests and abilities, different people like different careers. The student will understand the importance of choosing a career which coincides with his own interests and abilities. Finally, the student will be able to relate to careers some of his own interests and abilities.

Session 3 - "Decision-making"

This session will help the student become familiar with the decision-making process. Session 3 opens with the student following a recorded reading of the section on page 1, entitled "How to Make a Decision." It is expected that in the beginning most students will not understand these steps. After these steps are read, the student helps a character "John" with his decision. John is a grade 9 student who must choose which courses to take in grade 10. After hearing John's story, the student answers the questions on page 3 of the worksheet. Once these questions have been answered, the student begins step 2, to "seek information that is related to the decision and identify the alternatives." The student is shown various methods of seeking information (see the top of page 4 on the worksheet). The last exercise allows the student to identify and evaluate alternatives. This is step 3 of "How to Make a Decision."

The student will then plan how his decision will be put into action--step 4. This exercise requires the student to select three pieces of information (on the bottom of page 4) which he feels would be most useful to John. Read these three pieces of information (on pages 5 and 6) and then answer the questions on page 7.

This session lets the student understand how to make a decision. Since the student is actively involved in helping John with his decision, the student will be able to comprehend the decision-making process relatively easily. Being familiar with the decision-making process, and being able to make wise decisions, are of greatest importance with respect to choosing careers or paths which may eventually lead to a

particular career.

Session 4 - "Careers"

The purpose of this session is to help the student become familiar with different types of careers. The session opens with a description of different groups of careers, or career clusters, described on page 1 of the student worksheet. The session continues with a description of seven careers, and then the student is given two minutes to complete the exercise on page 2. In this exercise, the student checks off which career cluster a particular career belongs to, and the school subjects which would be most helpful to that career. The answers to this exercise are shown on the screen. If the student cannot read these answers, the teacher reads them. This pattern of describing seven careers with the exercise is continued two more times. Thus, a total of twenty-one careers are described in three sets of seven careers with three worksheets to accompany each set.

Complementing the theme of Session 1, this session will help the student learn about different careers. Career clusters can be useful to the student if he evaluates each with respect to his own interests and abilities, as was explored in Session 2. Finally, this session emphasizes the importance of personal and professional development through education. The student will better realize how important education is to all careers.

APPENDIX F

COVER LETTER ENCLOSED WITH CAREER AWARENESS PROGRAM PACKAGE

1

Box 48,
Education Building
Memorial University
St. John's, Nfld.
A1B 3X8

Dear

Enclosed is the Career Awareness Program material which you requested for your Grade IX students. I trust your students will enjoy this program and gain valuable knowledge from it.

It would be appreciated if you could return the entire program, minus the student worksheets, to us as soon as possible, as this program has been scheduled to be mailed to another school ten (10) days after your scheduled week of To ensure the speedy return of this program material, you will find enclosed a return address label and postage.

I look forward to seeing this material being improved upon, because of your help, and then being made available to all schools in Newfoundland wishing to become involved in same.

Your participation is greatly appreciated.

Sincerely,

Nancy Wilson,
Graduate Student.

encs: Address labels & postage)	
Four (4) Filmstrips)	
Two (2) Cassette Tapes)	
One (1) Teacher Manual)	TO BE RETURNED
Career Maturity Inventories)	
Answer Sheets)	
Student Worksheets)	NOT TO BE RETURNED

APPENDIX G

MATERIAL FOR THE ASSESSMENT OF TEACHER REACTION TO THE
CAREER AWARENESS PROGRAM: LETTER AND EVALUATION FORM.



MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1B 3X8

Department of Educational Psychology
Faculty of Education

Telex: 016-4101
Telephone: (709) 753-1200

March 9, 1979.

Dear

Thank you for your cooperation in participating in the Career Awareness program. We are looking forward to seeing improvements in this program in the future. In order to make more improvements, we are seeking your assistance and advice with regard to the Career Awareness program. Enclosed is a short evaluation form with questions regarding the content and presentation of the program. We would appreciate it if you could help us improve this program by answering the questions and returning the evaluation form to us as soon as possible. Thank you.

Sincerely,

Nancy Wilson,
Graduate Student.

D.S. Watts, Ed.D.,
Associate Professor.

NW/DSW/kjd

Evaluation Form

1. Rate each session with respect to the audio portion of the Career Awareness program. Put a check in the appropriate box.

	Ineffective	Minimally Effective	Effective	Very Effective
Session 1 - "What is Career Awareness"				
Session 2 - "Self Exploration"				
Session 3 - "Decision-making"				
Session 4 - "Careers"				

2. Rate each session with respect to the visual portion of the Career Awareness program. Put a check in the appropriate box.

	Ineffective	Minimally Effective	Effective	Very Effective
Session 1 - "What is Career Awareness"				
Session 2 - "Self Exploration"				
Session 3 - "Decision-making"				
Session 4 - "Careers"				

3. Would you be interested in ordering the Career Awareness Program next year for the benefit of your ninth grade students?

_____ YES _____ NO

4. According to your ninth grade students' reactions and comments about the program, how do you feel your students would rate the program?

_____ Minimally _____ Very
Ineffective Effective Effective Effective

5. What are your suggestions for further improvement of the Career Awareness Program? (Use back of sheet if necessary).

Please return to: Dr. D.S. Watts,
Dept. of Educational Psychology,
Memorial University,
St. John's, Nfld. A1B 3X8

APPENDIX R

NUMBER OF STUDENTS, MEAN AND STANDARD DEVIATION
OF TESTS ADMINISTERED IN EACH SCHOOL

TABLE A
NUMBER OF STUDENTS, MEAN AND STANDARD DEVIATION OF
POST-TEST AND PRE-TEST FOR EACH SCHOOL

Month	Counselor Available	Post-test			Pre-test		
		n	Mean	Standard Deviation	n	Mean	Standard Deviation
February	No counselor	16	30.625	3.032	*	*	*
	Part-time counselor	24	32.083	4.827	*	*	*
	Part-time counselor	23	29.391	4.520	*	*	*
	No counselor	11	27.455	5.067	12	25.583	3.528
	No counselor	22	31.545	4.194	23	31.087	4.389
	Part-time counselor	24	31.958	4.601	26	30.769	4.794
March	No counselor	14	30.286	5.518	*	*	*
	Part-time counselor	21	30.286	4.185	*	*	*
	No counselor	8	32.500	5.707	18	30.111	5.312
	Part-time counselor	26	31.423	4.483	29	30.517	4.748

*A pre-test was not administered.

