AN EVALUATION OF CAREER EDUCATION 3101, A COURSE OPTION OF THE NEWFOUNDLAND HIGH SCHOOL PROGRAM, FROM A COGNITIVE DEVELOPMENTAL PERSPECTIVE

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AN EVALUATION OF CAREER EDUCATION 3101, A COURSE OPTION OF THE NEWFOUNDLAND HIGH SCHOOL PROGRAM, FROM A COGNITIVE DEVELOPMENTAL PERSPECTIVE

by

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ABSTRACT

Career Education 3101, a course option of the reorganized high school program in Newfoundland, was examined from a predominantly cognitive developmental perspective using both student and teacher questionnaires. Course and noncourse students were compared using traditional indices of program success as well as measures of students' levels of complexity of career conceptualizations. Comparisons were also made on other variables including: academic stream, level in school, whether students were taught by a teacher or counsellor, extent of process employed by the instructors of the course, sex, age, and demography. Finally, questionnaire items permitted both students and teachers an opportunity to evaluate and indicate their perceptions of Career Education 3101.

Results showed the variables which most influenced students' responses to traditional career questions were: level in school, academic stream, and the course-noncourse variable. Sex and academic stream proved to be the two major indicators of the complexity of students' conceptualizations of careers. Finally, results showed that students' rating of the course and their perceptions of their teachers for the course varied strongly with the demographic variable and the extent of process variable.

The major weaknesses of Career Education 3101, as identified by the teachers, included a very poor text, the method used to evaluate student success, lack of resource materials and persons, and the fact that the course was being offered too late to be of maximum value to students.

Results of the study provided much support for cognitive developmental theory (e.g., Level III students, compared to Level I and Level II students, and students taught by teachers who employed a high degree of process, compared to those of low process teachers, demonstrated more complex conceptualizations of careers). Significant implications are identified (e.g., male and female students appear to require differential intervention strategies) and recommendations for programming and future research (e.g., examination of a major rural-urban difference) are offered.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION TO THE STUDY

Introduction

The 1983-84 school year saw the introduction of Career Education 3101 as a course option of the reorganized senior high school program in Newfoundland. The course, otherwise known as Creating a Career, is a publication of Employment and Immigration Canada, which was first piloted in Newfoundland in an evaluative study by John Hennebury (1980). The limited scope of the Hennebury pilot study restricted both the number of variables that could be studied as well as the generalizability of results. One effect of the recent province-wide introduction of Career Education 3101 was to make available a much larger sample for evaluation purposes. Numerous other variables are now available for study, which were inaccessible to Hennebury, and stronger claims can now be made for the generalizability of results.

The present chapter outlines a study which attempted to assess the effects of these previously inaccessible variables. Besides a statement of purpose and a rationale for the study, Chapter I also includes a precise statement of research questions that were addressed by the study, definitions of

relevant terms and variables, as well as an acknowledgement of specific limitations inherent in the present study.

Statement of Purpose

The purpose of this present study was to examine the Career Education 3101 course using both traditional indices of program success as well as recent, more theoretical criteria of success. Also, reactions of students and teachers to the course were used to identify both its strengths and weaknesses. Finally, the variation of student responses with several variables (e.g., age and level in school), other than the course-noncourse variable, were also studied in an effort to ascertain the relative importance of the course-noncourse variable and to evaluate the theoretical model upon which this study is based.

Rationale

The potential practical implications of the present study are numerous. The statements of recommendation arising from the results directly address many aspects of Career Education 3101. These recommendations involve course content, method of teaching, text materials, examination of student success, and grade level at which the course appears to be of maximum value.

The possible theoretical implications of the present study are no less important. The application of cognitive developmental theory to career development is still in its infancy (Blocher and Siegal, 1981; Knefelkamp and Slepitza, 1976; Welfel, 1982a; Welfel, 1982b). Obviously, empirical testing of this recent theoretical conceptualization is far from complete. It is hoped the present study will contribute to this ongoing process of evaluation.

While the practical and theoretical implications of this study are here being discussed separately, it should be realized that the distinction between the two is somewhat arbitrary and superficial. Results on many of the questionnaire items which were included primarily as a test of the theoretical model have translated into what were labelled above as practical implications. Similarly, a number of questionnaire items which were designed to address practical concerns produced results which were interpreted to have implications for the theoretical model.

The introduction of Career Education 3101 as a course option in the Newfoundland senior high school curriculum is part of a much wider recognition by education officials, throughout North America and the world, of the need for structured intervention in the career decision-making process of adolescents. This recognition has grown out of a half century of theorizing and research in the area of career development. Despite the tentative nature of career development

theories (Tolbert, 1980, p.33) and the differing emphasis of the major theoretical approaches, a broad research base is accumulating with implications for effective career counselling.

Probably the most widely supported theoretical conceptualization of careers is the developmental approach. Although often incorporating components of earlier theories, the developmental theories go beyond their forerunners by focusing on the individual over a relatively long period of time. Crucial to all developmental theories is the formulation of distinct developmental stages through which individuals progress as they advance along the continuum of career maturity.

The majority of developmental theories (e.g., Ginzberg, 1971; Gribbons and Lohnes, 1982; Havighurst, 1980; Super and Overstreet, 1966) maintain that advancement through these stages can be facilitated by career education programs which, depending upon the particular theory, focus on the mastery of particular skills or acquisition of certain knowledge and attitudes which are viewed as essential prerequisites for appropriate career choice.

To the extent that an individual possesses these skills, attitudes and knowledge, he is said to have career maturity. Career maturity is such a broad concept that it is difficult to define succinctly. Srebalus, Marinelli and Messing (1982) surveyed the various definitions and attempted to identify the elements common to most. These include self-knowledge, knowledge of occupations, realism of career options,

consistency of career choice over time, occupational field and job family, and certainty of career choice (pp. 22-23).

An enormous volume of literature on career maturity has accumulated over the past decade, or so, and a number of instruments have been developed which attempt to measure it (Crites, 1973; Super, Bohn, Forrest, Jordaan, Lindeman and Thompson, 1971; Westbrook, 1970, cited in Srebalus, Marinelli and Messing).

The development of the Creating a Career program appears to have been closely linked to the concept of career maturity. For example, the four units of the course - self-awareness, world of work, decision making and job search - very closely parallel the five components of the Competence Test of Crite's Maturity Inventory (1973). These subtests include Self-Appraisal, Occupational Information, Problem Solving, Goal Selection (Choosing a Job), and Planning (Looking Ahead). Also, Crite's CMI consists of an Attitude Scale which attempts to measure an individual's attitudes towards the world of work. Similarly, one of the specific objectives of Career Education 3101, as defined by the Department of Education, is "to develop a healthy attitude toward self and work" (Career Education 3101, 1983). Although Crite's definition of career maturity is being used here to demonstrate the congruence between Career Education 3101 and career maturity, equally striking parallels exist between the course and other definitions of the construct.

One variable which, until very recently, was not addressed directly by career development theory is cognitive development. In the past few years numerous writers (Blocher and Siegal, 1981; Knefelkamp and Slepitza, 1976; Welfel, 1982a; Welfel, 1982b; Young, 1981) have attempted to define the role of cognitive development in the process of career decision making. Drawing heavily from the earlier work of other cognitive developmental theorists such as Elkind (1967), Kitchener and King (1981), Perry (1970), and Piaget (Inhelder and Piaget, 1958, cited in Young, 1981), these writers have attempted to identify the implications of cognitive developmental theory for career counselling.

The high degree of interest in this recent theoretical conceptualization and the encouraging empirical support that has accumulated to date promoted this writer to adopt the cognitive developmental model of career development as the theoretical model for the present study. The initial formulation and subsequent empirical testing of this model were based almost exclusively on the study of college students. The question, therefore, arises as to the extent that the principles of cognitive developmental theory apply to the senior high school population. The present study attempted, in part, to answer this question.

The application of cognitive theory to this study was comprehensive. A bulk of the student questionnaire items attempted to distinguish between students located at different

levels of cognitive development. The Career Education 3101 course was evaluated, in part, by the complexity of students' conceptualizations of careers and the career choice process. Other variables (other than the course-noncourse variable) such as age, level, and academic stream were also studied as an empirical test of the cognitive model. Teaching strategies that were theorized to foster cognitive development were identified from the literature and a number of items on the teacher questionnaire were included in an effort to assess the degree to which these strategies were being utilized in Career Education 3101. Also, student responses on items that addressed traditional career questions (e.g., Has the student made an occupational choice?) were interpreted from the perspective of cognitive developmental theory.

According to cognitive developmental theory, as an individual matures, he progresses from the simplistic, absolutist view of careers to a "qualitatively different and much more complex and integrative perception that takes into account personal characteristics, social factors, and the process of career choice and involvement" (Tolbert, 1980, p. 82). Progress along the intellectual development continuum can be determined by measurement of a number of variables which change qualitatively as one matures. Key among these variables are locus of control, openness to alternative perspectives (Knefelkamp and Slepitza, 1976) and perceptions of authority figures (Welfel, 1982a and Welfel, 1982b).

Locus of control refers to the extent to which individuals perceive that they have control over their environments and destinies. As students mature they progress from a position of control based upon external factors (e.g., job market, advice of adults, or interest inventories) to a position where information is processed predominantly through their own internal reference points (Knefelkamp and Slepitza, 1976, p. 54).

Openness to alternative perspectives refers to the extent to which a student recognizes the legitimacy of other points of view and possible explanations even if the student differs with that perspective (Knefelkamp and Slepitza, 1976, p. 54). Individuals become more willing to entertain such alternative points of view as they progress through the stages of intellectual development. For example, they no longer believe that there is a single right career for them. They are able to entertain the notion of competing career alternatives and to weigh the advantages and disadvantages of each (Knefelkamp and Slepitza, 1976).

Students' perceptions of the powers and abilities of authorities also change as they develop intellectually. Such perceptions become more realistic with increasingly complex levels of intellectual development (Welfel, 1982b, p. 19). Authority figures, for example, are seen as rational people with extensive knowledge in their disciplines and, thereby, are well worth listening to and learning from. Individuals,

however, assume responsibility for their career decisions (Welfel, 1982b).

These theorized changes in students' cognitions as they mature are no longer simply the result of informal observation or theoretical speculation. Kitchener and King (1981), Knefelkamp and Sleptiza (1976), Stephenson and Hunt (1977), Strange and King (1981), Touchton, Wertheimer, Cornfeld and Harrison (1977) and others have well documented these developmental changes.

Using these and other theorized changes in students' perceptions, opinions and beliefs as a guideline, 15 items for the student questionnaire were constructed as a means of distinguishing between students, based on the complexity of their conceptualizations about careers.

It appears that the bulk of the most recent research into cognitive theories of career development has focused on means of fostering cognitive development. While several somewhat different theories of career development are prevalent today, there appears to be a consensus among the major theorists and researchers in this area as to how such development can best be enhanced. Blocher and Siegal (1981), Knefelkamp and Slepitza (1976), Schmidt and Davison (1983), Welfel (1982a), Welfel (1982b), Young (1981) and others concur with Sanford (1966, cited in Schmidt and Davison, 1983) that cognitive development can best be accomplished by a combination of challenge and support: challenge to stimulate

development and support so that the change is not too threatening.

To be maximally effective, challenge must be such as to stimulate students to question their present perceptions of careers, while at the same time, it must not be so discrepant with present perceptions that it is overwhelming and thus is rejected outright. Widick (1977, cited in Schmidt and Davison, 1983) labels such challenging as "plus one staging" while Blocher and Siegal (1981) define it as the presentation of "optimally discrepant information."

Challenge at lower stages of cognitive development involves exploration of the idea that there are several career choices for the student, and introduction of the notion of a career as a series of choices throughout one's life span rather than a single choice made irrevocably at adolescence. Numerous teaching strategies have been proposed as a means of providing appropriate levels of challenge for students. Review of these strategies reveals a common element; they are all process or activity oriented. For Young (1981), small group and classroom discussion groups are a source of disequilibration (challenge) which results from hearing other students discuss their perceptions and theories of careers. He also proposed techniques such as preparing for and debriefing work experiences, case studies, and interviewing workers. He emphasizes a real life dimension to career education. Similarly, Widick, Knefelkamp

and Parker (1975) stress experiential learning models as a means of providing challenge. Specifically, they propose role-playing, out-of-class experiences and discussion in class. These action-centered and experience-oriented approaches have become the accepted means by which cognitive developmentalists challenge inappropriate conceptualizations of careers.

Numerous studies (Sprinthall, 1973, cited in Widick and Simpson, 1978; Stephenson and Hunt, 1977; Touchton, Wertheimer, Cornfeld and Harrison, 1977) have demonstrated empirically the effectiveness of the challenge and support strategy in enhancing the cognitive development of students.

A major objective of the present study was the identification of teachers whose teaching styles consisted predominantly of those techniques specified above or similar techniques. Responses of students of these developmental or high process teachers were compared to students of teachers who did not frequently employ techniques that have been shown to challenge students' perceptions.

A strong consensus also exists among theorists and researchers in the area of cognitive development as to the means by which support should be provided during times of challenge. For example, for students at lower levels of cognitive development, it is agreed that a high degree of structure in instruction and a personal atmosphere appear to be the best way to provide support. Numerous studies

(Stephenson and Hunt, 1977; Touchton, Wertheimer, Cornfeld and Harrison, 1977; Widick, Knefelkamp and Parker, 1975) incorporating these support strategies with the challenge strategies discussed previously have reported positive changes in students' levels of cognitive development.

Although several items on the student questionnaire address the issue of teacher support, the examination of this variable is not a major focus of this study for two reasons. Firstly, it was felt that high school, unlike university, where most research on the cognitive model has taken place, typically offers a high degree of support (structure in class and personalism) to students. Secondly, it was felt that, unlike the challenge variable, the support variable could not be assessed validly by a questionnaire of the nature used in the present study.

Other than the 15 career conceptualization items on the student questionnaire and the items on the teacher questionnaire which provided information about teachers' extent of process, both of which have been discussed previously, numerous other items were included on both questionnaires as a means of obtaining additional evaluative data about the Career Education 3101 course. On the student questionnaire these items included traditional indicators of program success such as, has the student decided on an occupation?, how many careers does he perceive to be available to him?, does he plan to continue his education?, how confident does he feel

about his occupational choice?; and others. Also, items on both the student and teacher questionnaires provided respondents an opportunity to indicate their perceptions of the course, including its strengths and limitations. Additional details of the content of the questionnaires are provided in Chapter III, while Appendix D presents a copy of each.

Definition of Terms

A total of eight different variables were examined by the present study. While several of these variables require little or no explanation, others require operational definitions if they are not to be misinterpreted.

1. The course-noncourse variable refers to whether or not students completed Career Education 3101.

2. Level is defined as students' level or grade in school. The reorganized senior high school program in Newfoundland is designed as a three-year program, the three years or grades being referred to as Levels I, II and III.

3. The mathematics and language courses in which students were enrolled were used as criteria to define academic stream. Students enrolled in both academic

mathematics and language comprised the academic stream group, while those in both general or basic mathematics and language comprised the basic stream group. A third stream, consisting of those enrolled in academic math but basic language was also identified. The inclusion of this intermediate category was felt to be necessary since students in this group, unlike the basic students, fulfill the requirements for entrance into the province's technical colleges.

4. Two dimensions of the counsellor-teacher variable exist. Counsellors are those instructors of Career Education 3101 who have received graduate training in the area of educational psychology while teachers are those who have received no such specialized training.

5. The extent of process is defined as the extent to which instructors of Career Education 3101 employed experimental and activity-oriented teaching strategies. The data collected by Items 18 and 19 of the Teacher Questionnaire were used to rate instructors from 1 to 3 on this variable.

6. Three dimensions of the rural-urban variable were employed in this study. Students in large urban centers (population in excess of 10,000) or in the

environs of St. John's comprised the urban category. Rural students were those living in communities of less than 2,500 people. One island community which exceeded the 2,500 limit was included in this category because it was felt that its isolation status justified its rural classification. Finally, an intermediate group consisted of students whose home communities had populations within the 2,500 to 10,000 range. These communities could not be classified as truly rural or urban.

Research Questions

Each of the variables previously defined, plus the variables of sex and age, was the focus of one of the eight research questions addressed by the present study. These include:

Research Question #1: To what extent do Career Education 3101 students differ from noncourse students in their:
(a) responses to traditional career questions, and
(b) perceptions of careers and the career choice process?

Research Question #2: In what ways does student's level or grade in school influence his/her:
(a) responses to traditional career questions,
(b) conceptualizations of careers and the process of career choice, and
(c) perceptions of the Career Education 3101 course and his/her teacher for the course?

Research Question #3: To what degree does student's academic stream influence his/her:
(a) responses to traditional career questions,
(b) perceptions of careers and career choice, and
(c) rating of Career Education 3101 and their teachers for the course?

Research Question #4: Do students who are taught Career Education 3101 by trained counsellors vary from those who are taught by teachers in:
(a) their responses to traditional career questions,
(b) the level of complexity of their conceptualizations of careers and the career choice process, and
(c) their perceptions of the Career Education 3101 course and their teachers for the course?

Research Question #5: To what extent do students of high process teachers vary from those of low process teachers in their:
(a) responses to traditional career questions,
(b) conceptualizations of careers and the career choice process, and
(c) rating of both the Career Education 3101 course and their teachers for the course?

Research Question #6: How do males differ from females in their:
(a) responses to traditional career questions,
(b) perceptions of careers and career choice, and
(c) rating of Career Education 3101 and their Career Education 3101 teachers?

Research Question #7: To what extent does students' rural-urban classification vary with their:
(a) responses to traditional career questions,
(b) perceptions of careers and the process of career choice, and
(c) perceptions of the Career Education 3101 course and their teachers for the course?

Research Question #8: To what extent do older students vary from younger students in their:
(a) responses to traditional career questions,
(b) conceptualizations of careers and the process of career choice, and
(c) perceptions of both Career Education 3101 and their teachers for the course?

Summary

To summarize, the present study compared variations in student responses with dimensions of eight different variables. While the primary focus was the examination of the course-noncourse variable, the inclusion of the remaining variables/questions for study resulted in both important practical and theoretical implications.

Limitations

1. The sample, while it does include students from schools in the immediate environs of St. John's, does not include students from schools located within the city center. Two separate factors prevented the inclusion of these students. Firstly, none of the schools within the city that were under the jurisdiction of one of the St. John's school boards was offering Career Education as part of its curriculum during the time of the study. Secondly, the second school board felt that it was too late in the school year (mid-May) for the questionnaire to be administered in its two St. John's schools that were offering Career Education. The teachers of these classes indicated that all remaining time was needed for preparation for the upcoming public exam.

2. Results of the present study are generalizable

only to the Newfoundland high school population, from which the sample for this study was chosen.

3. The present study, not being of an experimental nature, does not present strong evidence for the existence of causal relationships.

4. The assignment of values for several variables (e.g., the rural-urban variable and the extent of process variable discussed above and others to be discussed in later chapters), while based, for the most part, on objective data also involved a degree of subjectivity.

5. Responses on both questionnaires could possibly have been influenced by attempts by students and teachers to provide what they perceived to be more acceptable responses.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The serious need of Canadian students for career education was highlighted by Breton (1972) who found that 40% of secondary school students felt they were inadequately prepared to make an occupational choice. Also, 34% indicated they had no occupational goal whatsoever. Recognition of this need has resulted in a tremendous surge of interest in career education across North America. Young (1981) maintains that one result of this heightened interest has been the development of courses, modules, units and other packages of career education (Leith and Fitzsimmons, 1978; Pawlovich, 1979). Career Education 3101 is one example of such a course.

Development of such programs would not have been possible had it not been for the evolution that has taken place in the past 50 years or so in the area of career development. Even though career development theory is as yet fragmented and incomplete, what is presently known provides a basis for programmatic efforts to spur the development of effective career behavior (Herr and Cramer, 1979, p. 68).

The present chapter provides an overview of the major theories that have attempted to identify and interrelate the various factors which influence the process of career choice. A major focus of the chapter is a discussion of the recently formulated cognitive theories of career development and the relevant research-related literature.

Theories of Career Development

Trait and Factor

Parsons (1909, cited in Zunker, 1981) is responsible for one of the earliest and most enduring theoretical conceptualizations of careers and career decision making. He proposed a tripartite process of vocational guidance. Essentially, he proposed that vocational guidance is accomplished first by assessing the individual, second by considering the characteristics of various occupations and finally by matching the individual with an occupation. The trait-and-factor model as it came to be known, with Williamson (1939 and 1949, cited in Zunker, 1981) as its major proponent dominated the field during the 1930's and 1940's (Crites, 1974, p. 3).

The past three decades have seen the trait-and-factor model severely challenged. Major studies by Ghiselli (1966, cited in Zunker, 1981, p. 4) and Thorndike and Hogan (1959,

cited in Zunker, 1981, p. 4) have revealed serious limitations of testing. Also, the basic assumptions that there is a single career goal for everyone and that decisions are primarily based on measured abilities (Herr and Cramer, 1979, p. 71) are in question. Zunker (1981) maintains that the trait-and-factor approach is far too narrow in scope to be considered a major theory of career development. Yet, it appears that the trait-and-factor model will continue (Herr and Cramer, 1979, p. 71), if only as a component (Super, 1983) of more comprehensive theories.

Psychoanalytic Approaches

The most ambitious effort to apply classical psychoanalytic theory to career development has been the work of Bordin, Nachmann and Siegal (1963, cited in Herr and Cramer, 1979, p. 85). Actually, the model proposed by Bordin et al. is not strictly psychoanalytical. Only a handful of the many psychoanalytic concepts are employed and their model goes beyond psychoanalytic concepts to a synthesis of psychoanalytic with other developmental theories (Srebalus et al., 1982, p. 43). At the core of their theory is the assumption that internal (intrapsychic) factors explain the difficulties clients have in making career decisions.

The psychoanalytic approach is accompanied by far less empirical support than the other major approaches (Herr and Cramer, 1979, p. 87). One major criticism is that since

psychoanalytic theory essentially concerns psychopathology, the very normal process of vocational choice must be added to the theory as an afterthought (Osipow, 1983, p. 56). Another serious limitation is that it does not take into consideration the external influences that individuals experience over their life span such as economic, cultural, or geographic limitations (Herr and Cramer, 1979, p. 87; Zunker, 1981, p. 27).

Needs Theories

Ann Roe's theoretical formulation of career development (1956, in Herr and Cramer, 1979, pp. 87-90) has a heavy personality emphasis. Usually referred to as a need-theory approach to career choice, her theory draws heavily from Maslow's conceptualization of needs hierarchy. The interactive effects of child-parent relations, environmental experiences and genetic endowment combine to determine the development of a need structure. This need structure, in turn, determines the type of occupation to which an individual will be attracted. "For example, individuals who desire to work in contact with people are primarily drawn in this direction because of their need for affection and belongingness (Zunker, 1981, p. 7).

Roe's theory has generated considerable research, but little support for her theoretical model (Osipow, 1983). The effect postulated by Roe of the parent-child interactions on

later vocational choices is difficult to validate. Differing parental attitudes and subsequent interactions within families present such an overwhelming number of variables that no study could be sufficiently controlled to be considered empirical.

Like Roe, Holland (1973, cited in Zunker, 1982, pp. 14-17) maintains that individuals are attracted to a particular role demand of an occupational environment which meets their personal needs and provides them with satisfaction (p. 14). He postulates the existence of six personality types and six environment types of the same names. These are Realistic, Investigative, Artistic, Social, Enterprising and Conventional. Like the old trait-and-factor approach, Holland's theory emphasizes the importance of matching individuals and occupational environments.

Holland's theory has generated an enormous volume of research, much of it supportive. However, it also suffers from the same limitations inherent in the trait-and-factor approaches. Osipow (1983) argues that a major limitation of Holland's theory is that it explains little about the process of personality development and its role in vocational selection.

> It is one thing to state that people with Investigative orientations are looking for an environment in which they can express their major personality orientation, but it is quite another story to explain how or why they developed their Investigative orientation to begin with. (p. 113)

Social Learning Approach

Krumboltz, Mitchell and Gelatt (1975, cited in Zunker, 1981, pp. 24-25) have proposed a social learning theory approach to career selection. The process of career development is said to involve four factors: genetic endowments and special abilities, environmental conditions and events, learning experiences and tasks approach skills. Essentially, social learning theory maintains that each individual's unique learning experiences over his/her life span develop the primary influences that lead to career choice.

While the authors have attempted to explain and simplify the process of career selection, the many variables introduced in the theory make empirical validation extremely difficult (Zunker, 1981, p. 25).

Developmental Approaches

Ginzberg and associates (1951, cited in Herr and Cramer, 1979, p. 91) are credited with one of the earliest attempts to explain the process of career selection as the culmination of a developmental process that spans a period of many years. Their three-stage model of career development, which covers the period from birth to early adulthood, is more descriptive than explanatory in that it does not provide strategies for facilitating career development (Zunker, 1981, p. 7). It appears that the major usefulness of this theory is in providing

a framework for the study of career development (Osipow, 1973, cited in Zunker, 1981, p. 7).

Probably the developmental approach that has received the most continuous attention, stimulated the most research, and is the most comprehensive is that of Donald Super and his colleagues (Herr and Cramer, 1979, p. 92). Super's theory, which followed shortly after Ginzberg's, attempted to incorporate additional factors, such as interests, that were lacking in the Ginzberg model. Super proposed the existence of five vocational developmental stages:

1. Growth (birth-age 14 or 15), characterized by development of capacity, attitudes, interests, and needs associated with self-concept.
2. Exploratory (ages 15-24), characterized by a tentative phase in which choices are narrowed but not finalized.
3. Establishment (ages 25-44), characterized by trial and stabilization through work experiences.
4. Maintenance (ages 45-64), characterized by a continual adjustment process to improve working position and situation.
5. Decline (ages 65+), characterized by pre-retirement considerations, work output, and eventual retirement. (Zunker, 1981, p. 10)

Super has identified five activities known as vocational developmental tasks which signal the progress of individuals through the developmental stages. Super felt that the completion of the appropriate tasks at each level was an indication of what he termed vocational maturity (Zunker, 1981, p. 11).

The construct vocational maturity as it has been described by Super and others is probably best defined by identification of its various components. These include knowledge of self, knowledge of the world of work, decision-making skills, job search skills, planning abilities, willingness to accept responsibility, appropriate perceptions of careers (e.g., career as a lifelong process), positive attitudes towards the world of work, and others.

Super's theory offers valid explanations of developmental concepts which have been generally supported by numerous research projects (Osipow, 1973, cited in Zunker, 1981, p. 13). The theory is also useful for developing objectives and strategies for career counselling and career education programs.

Cognitive Theories of Career Development

One factor, which until very recently, had not been discussed as either a component or determinant of career development is intellectual development. This is rapidly changing. In recent years intellectual development has become the focus of attention for many career development theorists.

L.L. Knefelkamp and R. Slepitza (1976) have proposed a model of career development which blends a developmental and cognitive approach. Emphasis is on the development of the cognitive processes used by individuals in organizing, integrating and utilizing career-related information and activities. Relying heavily on William Perry's (1970) theory

of cognitive development, Knefelkamp and Slepitza proposed a nine stage cognitive developmental theory of career development. As individuals advance through the increasingly complex stages, they are said to demonstrate positive qualitative changes on nine variables:

1. Locus of control - the source to which the student turns to define themselves and their environments.
2. Analysis - the ability to see a subject in its diverse perspectives.
3. Synthesis - the ability to integrate the diverse components of a subject into a complex whole.
4. Semantic structure - refers to the nature of the verbs and qualifiers used by students in their written and spoken language.
5. Self-processing - the ability to examine oneself and be cognizant of one's defining factors.
6. Openness to alternative perspectives - the extent to which one is aware of the legitimacy of other points of view and alternative explanations.
7. Ability to assume responsibility - the willingness to accept the consequences of one's actions.
8. Ability to take new roles - the ability to accommodate the characteristics of new roles.
9. Ability to take risks with self - the ability to risk self-esteem when new and appropriate demands are made. (Knefelkamp and Slepitza, 1976, p. 54)

The nine stages of cognitive development proposed by Knefelkamp and Slepitza are grouped into four broader and more abstract stages:

Dualism: The first stage is characterized by simple, dichotomous thinking, e.g., "There is only one right career for me."

Multiplicity: Individuals begin to consider the possibility of right and wrong decisions. More factors are now considered in the decision-making process.

Relativism: Individual's locus of control has switched from being predominantly external to become predominantly internal.

Commitment within Relativism: Career choice is now seen as a personal commitment. Increased responsibility for career decision-making is assumed by the individual.

Knefelkamp and Slepitza are not alone in their efforts to apply the principles of cognitive development to the career decision-making process. Blocher and Siegal (1981) contribute to the growing body of literature on cognitive developmental career theories by proposing six postulates which they claim provide a foundation for future comprehensive theories of career development:

Postulate 1: Humans are active stimulus-seeking organisms.

Postulate 2: Humans are motivated to develop when presented with information discrepant from existing information.

Postulate 3: Interaction of humans with their environments leads to the formation of cognitive structures through which events are construed, interpreted and evaluated.

Postulate 4: Human cognitive activities vary on both structure and content.

Postulate 5: Individuals vary widely on cognitive level of development.

Postulate 6: Psychological intervention should involve, first, thorough understanding of present conceptual systems, and second, the presentation of optimally discrepant information. (p. 41)

Based on the above postulates, Blocher and Siegal propose intervention strategies for career counselling and education which focus on person-environment interactions. Some of these strategies include involvement (by encouraging risk taking), challenge, support, structure (providing a clear sense of direction and purpose), and application (practical tryout of skills).

Another recent cognitive developmental theory is the reflective judgement model of Kitchener and King (1981). The reflective judgement model, like the Knefelkamp and Slepitza model, is based on Perry's (1970) model of intellectual and moral development. Kitchener and King propose a seven-stage development of reflective judgement. Numerous parallels between the models of Knefelkamp and Slepitza and Kitchener and King are obvious.

Welfel (1982b) discusses the application and implications of the reflective judgement model for career counselling by comparing two different stages of the model. She discusses two beliefs that are typical of Stage 2 thinking. The first, the crystal ball myth, refers to the belief that "people who

have it together always have clear, concise plans for their lives at all times." The second, the quitters-never-win myth, is a belief that once a decision is made it should be followed faithfully and that a change of plans indicates failure.

At this stage clients have unrealistic views of the power of the counsellor and a perception that valid vocational interest tests will tell them what they are interested in and what they ought to do (Welfel, 1982b, p. 19). Also, they complete career exploration assignments out of a trust in the counsellor's wisdom than any real insight into the purpose of generating career alternatives. Finally, Stage 2 students are typically impatient with a career counselling and decision-making process that takes too long.

According to Welfel, by Stage 4 students realize that there are several different directions which their career paths can follow. They simply can't figure out which one is best for them overall. "Objective means outside oneself with which to evaluate the reasonableness of decisions simply do not exist" (p. 19). Also, while a student might be uncomfortable with the ambiguity of being undecided, he/she may be even more uncomfortable with making the decision. Decision making at this stage is based almost exclusively on an intuitive feel for "what's best for me" (p. 20).

> That intuitive feel is often difficult to secure when one has the intellectual capacity to be aware of both the complexities of career choice and the lack of any outside

> authority who can guarantee the correctness of a career decision .... Moreover, clients are unlikely to fully grasp what is meant by weighing career alternatives as they do not yet understand the rules of inquiry for evaluating the many possible solutions to problems or that any criterion exists (except oneself) against which to weigh alternatives. (p. 20)

Welfel describes the reflective judgement model as providing the counsellor with a map to understand the client's responses and as a means to recognize the patterns behind the variations in students' capacities for framing goals (p. 20). For example, a client's reluctance to make a career decision in Stage 4 need not be viewed as some personality flaw, but rather as a consequence of Stage 4 thinking. The client is likely to be overwhelmed by the complexities of decision making and perceives that no outside authority exists that can confirm the appropriateness of his/her choice.

In conclusion, it appears that, while the formulation of a comprehensive cognitive developmental career theory may still be in its infancy, if interest in this approach over the past few years is any indication, then it appears that the effects of cognitive development on career conceptualizations and career decision making will remain a major concern of career theorists in the years to come.

Research Related to Cognitive Theories of Career Development

The research completed to date on the cognitive theories

of career development can be divided into two general areas. The first area of research consists of studies which have attempted to demonstrate the existence of the various hypothesized stages of cognitive development as well as the varying complexity of career conceptualizations associated with the different stages. The second group of studies involves attempts to foster movement along the continuum of cognitive development by means of structured intervention.

Knefelkamp and Slepitza (1976) report the results of a 1975 study conducted at the Ohio State University which they claim supports the existence of the nine areas of qualitative change that they employed as a basis for their career model as well as the "developmental movement within each of these areas as one moves from dualism to relativism" (p. 57). Results of indepth interviews and written protocols revealed that university freshmen and sophomores were generally located at Stages 2 and 3 of their model, seniors and first year masters students at Stages 3, 4 and 5 and advanced graduate students were located at Stages 6 and 7.

Similarly, Schmidt and Davison (1983, p. 565) cite numerous studies (Brabech, 1980; King, 1977; Kitchener, 1977; Kitchener, King, Davison, Parker and Wood, 1981; Lawson, 1980; Mines, 1980; Strange, 1978; Welfel, 1979) that have consistently shown that levels of Kitchener and King's construct of reflective judgement (RJ) increase with age and level of education. Graduate students scored higher than college

students and college students, in turn, scored higher than high school students.

Despite the fact that Knefelkamp and Slepitza's theory of career development, the reflective judgement theory of Kitchener and King, and Blocher and Siegal's eight postulates represent three different models of cognitive development, all three approaches are in agreement as to how cognitive development can be enhanced. All maintain that cognitive development can best be fostered by means of challenge and support. Widick (1977, cited in Schmidt and Davison, 1983) called this process "plus one staging", while Blocher and Siegal (1981) emphasized the presentation of "optimally discrepant information." Essentially, it has been theorized by the cognitive developmentalists that information or conceptualizations that are perceived by an individual to be somewhat discrepant from his present cognitive structure act as stimuli to motivate further integration and further cognitive development. An individual's attempts to reconcile novel, conflicting information with present beliefs and opinions results in the adoption of more complex conceptualizations. The novel, discrepant information must be only minimally discrepant from present information; novel information that is too discrepant will be viewed as confusing and overwhelming and will be rejected outright. Besides exercising care to ensure that the information is not overwhelming, it is also theorized that, during this period of

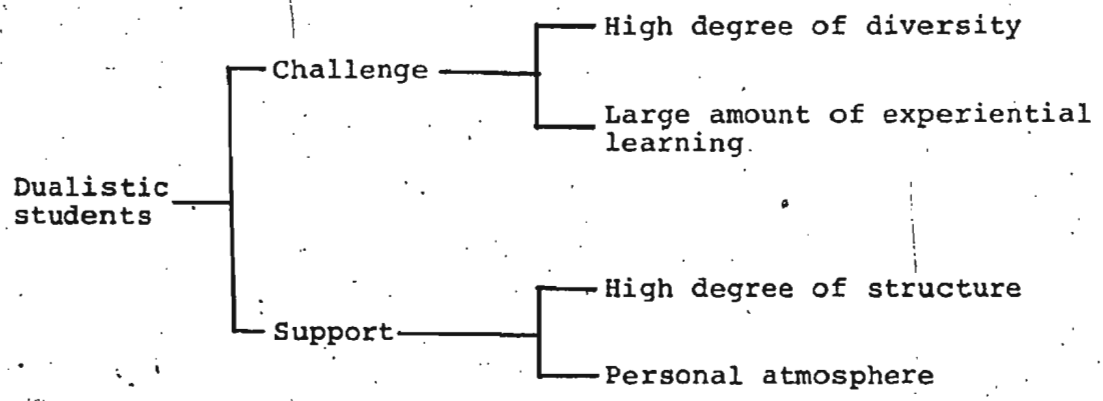
challenge, individuals also require support so that change is not too threatening.

A number of studies have attempted to demonstrate empirically that cognitive development can be enhanced by such a system of challenge and support. Such studies typically begin with an assessment of individuals' present stages of cognitive development, followed by the identification of the stimuli that act as challenge and support variables at those particular stages.

Touchton, Wertheimer, Cornfeld and Harrison (1977) maintain that the balance between challenge and support can best be achieved through variation of four aspects of instruction. These include structure, personalism, experience and diversity (p. 45). Figure 1 presents what they view as the appropriate balance for dualistic students.

Touchton et al. provide specifics of the challenge and support variables that were incorporated into a career planning course that was based on the Knefelkamp and Slepitza model. Diversity was introduced by interest inventories, content of the curriculum, and ideas from classmates and instructors. Direct experience consisted of discussion, role playing, field trips and interviews. Structure consisted of a syllabus with assignment and due dates, complete lesson plans for class and specific instructions for exercises. Finally, personalism included self disclosure among peers and from instructor, small group

Figure 1



interactions, individual interviews with instructors and instructor responses in logbook.

This developmentally designed course was compared to a traditional course and results indicate that 76% of students in the developmentally taught experimental course, compared to 41% of students in the traditional class, showed some increase in the complexity of thinking about careers. A more striking result was that 71% of the experimental group began the course as dualists, but only 21% remained dualists after having completed the course; 79% of this group were in the next higher stage, multiplicity, following the completion of the course. No change occurred in the pre and post measures of the number of dualists in the traditional class.

Stephenson and Hunt (1977), using a paradigm similar to that presented in Figure 1, also designed and tested a course that they based on the Knefelkamp and Slepitza model. The

course consisted of two units. The first unit, "Significant Others," included themes on the nature of love, trust and sexuality. Literary content consisted of Zorba the Greek, Who's Afraid of Virginia Wolf and If Beale Street Could Talk. The second unit, "Work/Career," included two themes, the meaning of work and the role of career in the definition of one's identity. Literary content consisted of A Thousand Clowns, Death of a Salesman and The Bell Jar. Results indicated that students in the experimental groups exhibited more upward stage movement than those in the control groups. Students in both experimental groups experienced an average growth of .85 of a stage, while the two control groups demonstrated increases of .42 and .12.

An earlier study by Widick, Knefelkamp and Parker (1975) also attempted to foster cognitive development by means of challenge and support but, unlike the two studies cited above, the emphasis was not on development of more complex conceptualizations of careers. Instead, the primary theme of the course they designed and taught developmentally was the resolution of identity. Content materials included, Don Quixote, Inside the Third Reich, A Thousand Clowns, Death of a Salesman, The Great Gatsby and Siddhartha. Results indicated that the dominant Perry stages of development for the freshmen students at the beginning of the course were 3 and 4 and at the termination of the course were 4 and 5. An interesting result of this study was that the course more easily effected

movement from certain stages than from others. In particular, efforts to move dualistic students up the continuum toward relativism were successful, while little success resulted from efforts to move relativistic students to the point of making commitments (p. 294). The implications of this finding for high school students, the majority of whom are dualists, are obvious.

Finally, Mason (1978, cited in King, 1978) studied changes in cognitive complexity, locus of control and empathy among master's level counselling students who were enrolled in a year long counselling course which was taught using the methodology of developmental instruction. She found that statistically significant changes in development on all three variables had occurred over the year long period.

Clearly, research to date indicates that individuals progress through a series of stages of cognitive development, each characterized by increasingly more "complex epistemological assumptions and their relationship to how individuals justify their beliefs" (Welfel, 1982a, p. 490). In particular, research has identified the increasingly complex career conceptualizations that accompany cognitive development. Finally, some light has been shed on the means by which descriptive cognitive developmental theory can be translated into prescriptive intervention strategies which function to enhance the rate of cognitive development.

CHAPTER III

METHODOLOGY

Introduction

Included in the present chapter are descriptions of the procedures employed by this writer to collect data for the study. Also included are descriptions of the samples and instruments used and discussions of the preparation of the data for statistical analysis as well as the statistical techniques employed.

Procedures

All teachers of Career Education 3101 whose students had been selected to take part in the study were contacted in person or by phone. The general purpose of the student and teacher questionnaires was explained at this time and each teacher was asked to administer the student questionnaires to his/her Career Education 3101 class and to a comparison class which was not enrolled in Career Education 3101 and to complete the teacher questionnaire. Teachers' agreement to participate was followed by distribution of the questionnaires, which was

accomplished by mail or in person by this writer. The questionnaires that were delivered by mail were accompanied with a stamped, self-addressed envelope and instructions for their return. When questionnaires were dropped off in person, arrangements were made for their pick-up at a designated time. All packets of questionnaires were accompanied by a cover letter reviewing the purpose of the study and the return procedure as well as thanking the teachers for their cooperation.

Using a list of the names of all schools in the province that were offering Career Education 3101, 29 additional teacher questionnaires were mailed to teachers of the course. Not knowing the names of the teachers of Career Education 3101 in these schools, the questionnaires were addressed to the principals. Each of these questionnaires was accompanied by a stamped, self-addressed envelope and a cover letter explaining the purpose of the study and requesting that the questionnaire, cover letter, and return envelope be passed on to the teacher of Career Education 3101 for completion.

Samples

The student sample consisted of 790 students, 432 (54.7%) of whom were enrolled in Career Education 3101 and 358 (45.3%) of whom comprised a comparison group. The students were from 19 different schools and 13 school districts. Although not random, efforts were made to ensure that the sample was

representative by the inclusion of students from most regions of the province. Table Y (Appendix E) provides a more comprehensive variable by variable breakdown of the student sample.

The teacher sample was comprised of 41 teachers, 21 of whom were the Career Education 3101 teachers of the 432 students mentioned above. The remaining 20 teachers were the respondents to the additional 29 teacher questionnaires that were sent to Career Education 3101 teachers via the school principals. Twenty-one of all the teachers were trained counsellors, while the remaining 20 had received no specialized training in guidance and counselling.

Instruments

Three different questionnaires were employed in the present study, two student questionnaires and a teacher questionnaire. One student questionnaire was administered to students of Career Education 3101, while the second was completed by a comparison group of students who were not enrolled in Career Education 3101. Since both student questionnaires were identical, with the exception that the questionnaire for noncourse students had certain items omitted, only the longer version will be described in detail at this point.

The student questionnaire (Appendix D) can be considered

to consist of four parts, although it is not physically divided into distinct sections. The first section (Items 1 to 13) consists of, what can probably be best described as, traditional career questions. Items included attempted to gather information about whether or not students had decided on an occupation, how they felt about their career choice or the prospect of making a choice, how many career options they thought were available to them, how many occupations they had seriously considered pursuing, if they planned to continue their education, what their specific plans were for after graduation and other career-related questions.

The second section (Items 14 to 28) of the student questionnaire consisted of items which attempted to assess the complexity and appropriateness of students' conceptualizations of careers and the career choice process. Items of this section were developed directly from the cognitive theory of Blocher and Siegal (1981), Knefelkamp and Slepitza (1976), Schmidt and Davison (1983), and Welfel (1982a and 1982b). While this theoretical conceptualization is in its developing stages, it is this author's contention that sufficient empirical support has been accumulated to validate the items contained in this section of the questionnaire.

The third section provided students an opportunity to evaluate and indicate their perceptions of both their Career Education 3101 teacher and the course itself. Again, items were of the Likert type and students were required to indicate their agreement or disagreement with a number of statements

about the Career Education 3101 course and their teachers for this course. This section was omitted from the questionnaire for noncourse students.

The final section of the questionnaire contained a variety of items which, due to their nature, were inappropriate for either of the three previous sections. The decision was made to cluster these items together at the end of the questionnaire. Included was an item which provided a list of possible ways in which Career Education 3101 teachers could help students with their career plans. Students were requested to rank order this list from most important to least important. Another item provided students an opportunity to make any criticism, suggestion, or other comment about the course. Finally, an item on this last section requested occupational information about students' parents.

The items of the teacher questionnaire were of a variety of types. Some were of the Likert type, others required "yes" or "no" responses, while still others were open-ended questions which gave teachers greater freedom to elaborate. Items 1-3 and 26-28 dealt with teacher preparation and training for Career Education 3101. Items 4-8 and 13-15 dealt with how teachers perceived and evaluated the course and how they thought others perceived the course. Items 9-11 required that teachers indicate the extent of their confidence and perceived ability to teach Career Education 3101. Items 18 and 19 dealt with their mode of teaching the course, while Items 22-25 were open-ended items which provided teachers an opportunity to

indicate strengths and weaknesses of the course and to suggest improvements. Finally, Items 31-35 attempted to gather information from teachers about their use of the services available from guidance counsellors. These last items, as well as Items 26-30 which dealt with training and inservicing were completed only by teachers who had not received formal training as counsellors.

The actual design of the questionnaires took place over several months and underwent a number of revisions following the initial draft stage. The original drafts of the questionnaires were viewed by a number of individuals expert in the areas of career education and/or research design. The experts were requested to examine both the content and design of the instruments. Second drafts were then produced, incorporating the alterations suggested by the expert examiners. These second versions were then field tested on a number of students and teachers of Career Education 3101. The time requirements for completion were recorded and found to be satisfactory (e.g., less than one 40-minute class period). Also, any ambiguities, difficulties or suggestions were recorded. Based on this administration, third and final versions of each questionnaire were completed.

Preparation for Analysis

Coding of the teacher and student questionnaires for computer analysis was performed by the author and involved the assignment of a number to each and every response. For

all Likert-type items this was a very routine matter. In the case of open-ended items, responses were categorized and assigned a numeric value. For example, all negative comments by students about the textbooks used for Career Education 3101 formed one response category and thus were all coded with the same number.

The coding of data obtained from Item 5 of the student questionnaire involved somewhat more than arbitrarily selecting numbers to represent particular responses and is therefore deserving of further discussion at this point. This item, which requested that students list all the occupations that they had seriously considered pursuing, provided three different pieces of data for each student:

1. Firstly, the total number of occupations listed by each student was recorded and used to compare students on different variables.
2. Secondly, each student was assigned a value of 1 or 2 to indicate whether or not the majority of occupations he/she had seriously considered were consistent with his/her abilities. Students' academic stream was used as an indicator of abilities.
3. Finally, using Holland's classification of occupations (cited in Srebalus et al., 1982) as a guideline, each student was assigned a value from 1 to 4 to indicate the degree to which his/her listed occupations demonstrated consistency of interests.

Admittedly, these last two uses of the data from Item 5

involve a degree of subjectivity. However, for purposes of this study, more rigorous and objective procedures for assigning these values were not felt to be justified, nor was this writer convinced that such procedures would produce more valid results.

Statistical Analysis

Statistical analysis consisted primarily of the use of the SPSS Crosstabs procedure. The Chi-square statistic was used to test for significant differences on items which produced nominal data, while Kendall's Tau c was employed with interval data. Due to unequal distribution of respondents with the major variables studied (e.g., the majority of students who completed Career Education 3101 were also in Level III), it appeared possible that a number of the Chi-square of Tau c relationships might have resulted from the confounding influences of other variables. In these cases, multivariate analyses of variance were performed on the variables in question in an effort to confirm the original Chi-square or Tau c relationships and to establish the independence of the particular variables in question. While the author acknowledges that the MANOVAS do not establish the independence of the different variables beyond any doubt, it is felt that they do offer additional evidence for their independence and, therefore, their use is warranted.

CHAPTER IV

RESULTS AND STATISTICAL ANALYSIS

Introduction

The present chapter has been divided into two sections. Part I, which concentrates primarily on data obtained from the student questionnaire, consists of the presentation of results relevant to the research questions posed in Chapter II. Part I has thus been divided into eight sections, each corresponding to one of the eight research questions. Each of these sections has, in turn, been further subdivided into three subsections. Each subsection addresses a particular aspect of the research question under examination.

Each of the first subsections consists of a presentation of the results of items which address what can be best described as traditional or conventional career questions. They deal with whether or not an occupational choice has been made, feelings about this choice, students' estimates of the extent of their career information, their plans for post-secondary education, and other related topics.

The second subsections, more than any others, are of critical importance as a test of the cognitive model of career development since they involve a presentation of the

results of items which specifically attempt to assess students' conceptualizations of careers and the career choice process.

Finally, the third subsections present the results of items which provided students an opportunity to evaluate the Career Education 3101 course and to indicate their perceptions of their teachers for the course.

The very large volume of data accumulated from the student questionnaire posed an editorial problem and necessitated that only results crucial for an examination of the research questions be included in Part I. The remaining data, while somewhat less crucial, was still felt to be of significant value and, as such, has been included in Appendix A.

Part II of the present chapter consists of a presentation of the results of the teacher questionnaire. Unlike Part I, it is not further subdivided.

It should be noted at this point that, for editorial reasons, item results for all students combined have been included in Appendix B. For example, Table L indicates the total number and overall percentage of all students questioned who have decided on an occupation that they plan to pursue. No breakdown by variables (e.g., sex, age, course-noncourse, etc.) occurs in Appendix B.

Part I: Results of Student Questionnaire

Research Question #1: To what extent do Career Education 3101 students differ from noncourse students in their:
(a) responses to traditional career questions, and
(b) perceptions of careers and the career choice process?

In all, significant differences between course and noncourse students occured of 14 of a possible 30 items. (This total does not include Items 29, 30, and 31 which were only completed by students of Career Education 3101, and thus did not permit course-noncourse comparisons). Details of these significant differences follow.

Traditional Career Questions

On the traditional career questions (Items 1 to 13) Career Education 3101 students varied significantly from those who did not complete the course on eight items. The significance of the course-noncourse variable on this cluster of items was also confirmed by a multivariate analysis of variance. Three variables, the course-noncourse variable, level in school, and stream were used as independent variables for this MANOVA, while the items themselves acted as the dependent variables. The resulting F value for the course-noncourse variable was significant at the .01 level, while no significant interactive effects resulted (Table 1).

Several items were omitted from the MANOVA because their responses constituted nominal data. Nominal data do not fulfill the level of measurement requirements for an analysis of variance. The omitted items included Items 6, 7, 9, 12, and 13. The inclusion of Items 1 and 8 is justified if the assumption is made that the resulting dichotomous data represent two extremes of a continuum from "yes" to "no".

Table 1

MANOVA for Traditional Career Question Items (1 to 13) Using the Course-Noncourse Variable, Level and Academic Stream as Independent Variables

Effect	F	df	p<
Course-noncourse by level by stream	.87	16	.601
Level by stream	1.33	16	.170
Course-noncourse by stream	1.10	16	.353
Course-noncourse by level	1.36	8	.209
Stream	3.40	16	.000
Level	3.84	8	.000
Course-noncourse	6.98	8	0.000

On the item requesting students to list all occupations that they had seriously considered pursuing, students who completed Career Education 3101 listed significantly (Table 2) more occupations than did students who did not complete the course. Only 4.6% of the Career Education 3101 students responded with only one career, compared to 7.7% of the noncourse students.

Table 2

Number of Careers Seriously Considered

Number of Careers	Course		Noncourse		Total	
	N	%	N	%	N	%
1	19	4.6	26	7.7	45	6.0
2	71	17.7	74	22.0	145	19.3
3	115	27.8	86	25.6	201	26.8
4	87	21.0	63	18.6	150	20.0
5	45	10.9	32	9.5	77	10.3
6	35	8.5	29	8.6	64	8.5
7	21	5.1	12	3.6	33	4.4
8	3	.7	5	1.5	8	1.1
9	18	4.3	9	2.7	27	3.6
Total	414		336		750	

Tau c < .05

Using the 1-4 rating scale discussed earlier to indicate the degree of consistency of interests demonstrated by the occupations that students had seriously considered pursuing, students who completed Career Education 3101 varied significantly (Tau c < .01) from their noncourse counterparts in that their stated occupations indicated a higher degree of consistency of interests. Table 3 indicates that 49.8% of Career Education students listed occupations that were ranked as being consistent or very consistent, compared to 38.7% of noncourse students. The significance of this result was confirmed by a univariate analysis of variance that was significant at the .01 level.

Table 3

Consistency of Interests Demonstrated by Occupations Considered

Consistency	Course		Noncourse		Total	
	N	%	N	%	N	%
Very consistent	66	16.7	21	6.9	87	12.4
Consistent	131	33.1	97	31.8	228	32.5
Inconsistent	148	37.4	119	39.0	267	38.1
Very inconsistent	51	12.9	68	22.3	119	17.0
Total	396		305		701	

Tau c < .01

Students who completed Career Education 3101 also varied significantly (Chi-square < .01) from those who did not complete the course in their responses to an item requesting that they indicate their plans for after graduation. Only 21.6% of Career Education 3101 students indicated that they planned to attend Memorial University, compared to 36.3% of students who did not complete the course. Also, 21.9% of Career Education students indicated that they intended to attend a trades school, compared to only 13% of noncourse students (Table 4).

Students' estimates of the present extent of their information about careers also varied significantly (Tau c < .01) with whether or not students had completed Education 3101. Table 5 indicates that 50.6% of students who completed the course indicated that their knowledge of careers was "extensive" or "very extensive," compared to only 23.6% of students who did not complete the course.

Career Conceptualizations

Items 14 to 28 attempted to assess students' conceptualizations of careers and the career choice process. Career Education 3101 students differed significantly from those who did not complete the course on six of the fifteen items of this section. A multivariate analysis of variance was also performed on these items in an effort to eliminate the

Table 4

Plans for After Graduation

Plans	Course		Noncourse		Total	
	N	%	N	%	N	%
M.U.N.	93	21.6	128	36.3	221	28.0
College of Trades & Technology	76	17.7	37	10.5	113	14.4
College of Fisheries	15	3.5	27	7.6	42	5.4
Trades School	94	21.9	46	13.0	140	17.9
School of Nursing	6	1.4	1	.3	7	.9
Police Academy	2	.5	1	.3	3	.4
Armed Forces	8	1.9	10	2.8	18	2.3
Other Institutions	47	10.9	32	9.1	79	10.1
Get a Job	16	3.7	12	3.4	28	3.6
Take Some Time Off	15	3.5	4	1.1	19	2.4
Other	4	.9	7	2.0	11	1.4
Undecided	48	11.2	48	13.6	96	12.3
Total	430		353		783	

Chi-square < .01.

Table 5

Students' Estimates of Extent of Their Present Career Information

Extent	Course		Noncourse		Total	
	N	%	N	%	N	%
Very limited	3	.7	6	1.7	9	1.1
Limited	25	5.8	36	10.1	61	7.8
Fair	185	42.9	230	64.6	415	52.7
Extensive	196	45.5	78	21.9	274	34.8
Very extensive	22	5.1	6	1.7	28	3.6
Total	431		356		787	

Tau c < .01.

possible confounding effects of level and stream upon the course-noncourse variable (e.g., a majority of students that comprised the course group was both in the academic stream and in Level III). The resulting F value for the course-noncourse variable was significant at only the .1 level (Table 6). The low level of significance obtained on the MANOVA provides only weak support for the six Tau c relationships that exist on this section of the questionnaire. As a result these relationships should be interpreted somewhat more cautiously than other relationships that are significant at the .01 level.

Table 6

MANOVA for Career Conceptualization Items (14 to 28) Using the Course-Noncourse Variable, Level and Academic Stream as Independent Variables

Effect	F	df	p <
Course-noncourse by level by stream	.90	30	.617
Level by stream	*	*	*
Course-noncourse by stream	.69	30	.897
Course-noncourse by level	1.70	15	.047
Stream	1.98	30	.001
Level	1,92	15	.018
Course-noncourse	1.49	15	.101

*Eigenvalue problem failed to converge.

The significant differences between course and noncourse students on this section of the questionnaire indicate that Career Education 3101 students, compared to students who did not take the course:

(i) did not prefer that their counsellors, teachers, or parents simply tell them what was important to know about careers (Item 18),

(ii) did not agree that they must be sure about their occupational choice (Item 24),

(iii) agreed that vocational questionnaires are able to tell them which occupations are right for them (Item 20),

(iv) did not agree that it was the job of counsellors and/or teachers to guide students into the right occupations (Item 15),

(v) did not agree that it was important for them to stick to whatever career choice they make (Item 21), and

(vi) did not agree that people do not have much say in their careers (Item 19).

It should also be noted that of the six significant differences that resulted on this section of the questionnaire, the direction of the differences on five of the six items was such as to indicate that students who completed the course had more complex conceptualizations of careers than did students who did not complete Career Education 3101. Also, it is worthy of note at this point that the MANOVA discussed above did not reveal any interactive effects between the course-noncourse variable, level in school and academic stream on this cluster of items.

Research Question #2: In what ways does student's level or grade in school influence his/her:
(a) responses to traditional career questions,
(b) conceptualizations of careers and the process of career choice, and
(c) perceptions of the Career Education 3101 course and his/her teacher for the course?

In terms of number of significant differences on questionnaire items, student's level in school placed fourth among the eight variables studied.

Traditional Career Questions (Items 1 to 13)

Level resulted in more significant differences on this section of the questionnaire than did any other variable studied. The significance of level on these items was confirmed by a multivariate analysis of variance using the course-noncourse variable, level and academic stream as independent variables. The resulting F value for level was significant at the .01 level. No significant interactive effects were revealed by the MANOVA (Table 1).

Specific results indicated that significantly more (Chi-square < .01) Level III students, compared to lower level students, had decided on an occupation that they planned to pursue (Table 7). This difference was confirmed by a significance level of .01 on a univariate analysis of variance.

Table 7

Percentage of Students at Different Grade Levels who have Decided on an Occupation

Choice Made?	Level III		Levels I & II		Total	
	N	%	N	%	N	%
Yes	405	71.4	122	55.5	527	67.0
No	162	28.6	98	44.5	260	33.0
Total	567		220		787	

Chi-square < .01.

Level varied significantly (Tau c < .01) with the number of career options that students indicated they had seriously considered pursuing. The higher the grade level, the more career options students had considered (Table 8).

Grade level also varied significantly (Tau c < .01) with the consistency of students' academic abilities (as indicated by the subjects in which they were enrolled) and the careers they had seriously considered. Level III students, compared to lower level students, tended to have considered careers that were more consistent with their abilities (Table 9).

Also, the degree to which the careers considered by a student were similar in interests varied significantly (Tau c < .05) with level. Again, Level III students, compared to lower level students, tended to have considered careers which indicated more consistency of interests (Table 10).

Finally, Level III students rated the extent of their present career information significantly higher than did lower level students. Table 11 reveals that 41.1% of Level III students, compared to 32.0% of lower level students, ranked their knowledge of careers as being "extensive" or "very extensive."

Career Conceptualizations (Items 14 to 28)

Responses on five of these career conceptualization items varied significantly with grade level. The importance

Table 8

Number of Careers Seriously Considered by Level in School

Number of Careers	Level III		Levels I & II		Total	
	N	%	N	%	N	%
1	30	5.5	15	7.5	45	6.0
2	96	17.6	48	24.0	144	19.3
3	149	27.2	52	26.0	201	26.9
4	110	20.1	39	19.5	149	19.9
5	56	10.2	20	10.0	76	10.2
6	49	9.0	15	7.5	64	8.6
7	28	5.1	5	2.5	33	4.4
8	5	.9	3	1.5	8	1.0
9	24	4.4	3	1.5	27	3.6
Total	547		200		747	

Tau c < .01.

Table 9

Consistency between Abilities and Careers Seriously Considered by Level in School

Consistency	Level III		Levels I & II		Total	
	N	%	N	%	N	%
Consistent	478	93.5	161	83.4	639	90.8
Inconsistent	63	12.3	32	16.6	95	13.5
Total	511		193		704	

Tau c < .01.

Table 10

Consistency of Interests Demonstrated by Occupations Seriously Considered

Consistency of Interests	Level III		Levels I & II		Total	
	N	%	N	%	N	%
Very consistent	71	13.8	15	8.2	86	12.3
Consistent	168	32.6	59	32.2	227	32.5
Inconsistent	195	37.8	72	39.3	267	38.2
Very inconsistent	82	15.9	37	20.2	119	17.0
Total	516		183		699	

Tau c < .05.

Table 11

Students' Estimates of the Extent of Their Present Career Information by Level in School

Extent of Knowledge	Level III		Levels I & II		Total	
	N	%	N	%	N	%
Very limited	7	1.2	2	.9	9	1.1
Limited	42	7.4	18	8.2	60	7.7
Fair	284	50.3	129	58.9	413	52.7
Extensive	209	37.0	65	29.7	274	34.9
Very extensive	23	4.1	5	2.3	28	3.6
Total	565		219		784	

Tau c < .05.

of level on this cluster of items was confirmed by a previously discussed MANOVA which used the course-noncourse variable, level and stream as independent variables. Level fell only slightly short of significance at the .01 level. No interactive effects significant at the .01 level resulted (Table 6).

Specific results on these items indicated that Level III students, compared to lower level students:

(i) agreed with the statement that "there is no such thing as a single right career for a person" (Tau c < .05),

(ii) did not agree that it was "important for me to stick to whatever career choice I make" (Tau c < .01),

(iii) agreed that there are many occupations that are suitable for them (Tau c < .01),

(iv) disagreed that they must be sure about an occupational choice (Tau c < .05), and

(v) disagreed that parents and teachers probably know better than anybody which occupations are best for them.

The significance of (ii) and (iii) above was confirmed by univariate analyses of variance, both of which resulted in F values significant at the .01 level. It is important to note that the direction of all five of the above significant differences was such that Level III students demonstrated more appropriate conceptualizations of careers and the career choice process than did lower level students.

Students' Rating of the Course and Their Perceptions of Their Teachers (Items 29 and 30)

Responses on eight of the fifteen parts of Item 29 and Item 30 varied significantly with level. As with the two previous sections of the questionnaire, the significance of level as an important variable was confirmed on Items 29 and 30 by a MANOVA. Using level and stream as independent variables, the MANOVA produced an F value for level that was significant at the .01 level; no significant interactive effects resulted (Table 12).

An obvious trend existed on the eight parts of these two items in which significant differences resulted. In all eight cases Level III students were more critical of the

Table 12

MANOVA for Items Involving Rating of Career Education 3101 and Teachers of the Course (Items 29 & 30) Using Level and Stream as Independent Variables

Effect	F	df	p<
Level by stream	.66	30	.918
Stream	1.41	30	.074
Level	2.13	15	.008

course and/or their teacher for the course than were lower level students. Additional support for these significant differences was provided by univariate analyses of variance which confirmed six of the eight Tau c relationships that existed on this section of the questionnaire.

Research Question #3: To what degree does student's academic stream influence his/her:
(a) responses to traditional career questions,
(b) perception of careers and career choice, and
(c) rating of Career Education 8101 and his/her teacher for the course?

Overall, academic stream in school resulted in as many significant differences as any other variable studied. Only

one other variable, the rural-urban variable, resulted in an equal number of differences.

Traditional Career Questions (Items 1 to 13)

Significant differences with stream resulted on ten of the fifteen items of this section. As mentioned earlier, a multivariate analysis of variance was performed in an effort to establish the independence of the course-noncourse variable, level and stream. The MANOVA confirmed the significance of stream on responses to the first part of the questionnaire, resulting in an F value for stream that was significant at the .01 level. Also, as mentioned earlier, no significant interactive effects involving these three variables was discovered (Table 1).

Specifically, basic students, compared to academic students, indicated that they felt more confident about their occupational choices. Table 13 indicates that 51.0% of students enrolled in both basic math and language feel "very confident" about their choice, compared to only 38.2% of students enrolled in academic math and language.

Student responses indicating the number of occupational options that they perceived to be available to them also varied significantly (Tau c $<$ .01) with stream. Academic students, compared to basic students, indicated that they felt that there were more options available to them (Table 14).

Table 13

Students' Feelings about Occupational Choice by Academic Stream

Feeling	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Very confident	120	38.2	21	48.8	79	51.0	220	43.0
Minor concerns	171	54.5	20	46.5	59	38.1	250	48.8
Nonconfident	17	5.4	1	2.3	10	6.5	28	5.5
Very worried	6	1.9	1	2.3	7	4.5	14	2.7
Total	314		43		155		512	

Tau c < .05.

Table 14

Students' Perceptions of the Number of Career Options Available to Them by Academic Stream

Number of Options	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Less than 5	68	14.1	11	18.3	44	19.8	123	16.1
5 to 10	138	28.6	21	35.0	80	36.0	239	31.2
10 to 20	86	17.8	10	16.7	45	20.3	141	18.4
20 to 100	98	20.3	14	23.3	29	13.1	141	18.4
100 to 500	39	8.1	1	1.7	17	7.7	57	7.5
Over 500	54	11.2	3	5.0	7	3.2	64	8.4
Total	483		60		222		765	

Tau c < .01.

The significance of this item was confirmed by a univariate analysis of variance which resulted in an F value for stream that was significant at the .01 level.

The degree to which careers seriously considered by students were similar in interests varied significantly (Tau c < .01) with academic stream. Interestingly, basic students, compared to academic students, tended to have considered occupations which demonstrated more consistency of interests (Table 15).

Table 15

Consistency of Interests Demonstrated by Careers Seriously Considered

Consistency	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Very consistent	33	7.5	9	15.8	44	21.9	86	12.3
Consistent	143	32.5	18	31.6	66	32.8	227	32.5
Inconsistent	182	41.4	20	35.1	64	31.8	266	38.1
Very inconsistent	82	18.6	10	17.5	27	13.4	119	17.0
Total	440		57		201		698	

Tau c < .01.

Student responses to two items indicating if they planned to continue their education beyond high school and what their plans were for after graduation also varied significantly (Chi-square < .01) with academic stream. Significantly more students enrolled in academic math and language indicated that they planned to continue their education (Table 16). The significance of this difference was confirmed by a univariate analysis of variance significant at the .01 level.

Table 16

Percentage of Students Planning to Continue Their Education by Academic Stream

Planning to Continue?	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Yes	472	96.7	53	86.9	188	85.5	713	92.7
No	16	3.3	8	13.1	32	14.5	56	7.3
Total	488		61		220		769	

Chi-square < .01.

As to their plans for after graduation, 43.8% of academic students, compared to 3.1% of basic students, plan to attend Memorial University (Table 17). Also, 32.7% of basic students, compared to 10.4% of academic students, plan to attend a trades school. It is interesting to note that 15.9% of the students enrolled in both basic math and language plan to attend the College of Trades and Technology even though admission to any of the technology programs at the College requires the completion of academic math in high school.

Finally, stream also varied significantly (Tau c < .01) with students' estimates of the extent of their present knowledge of careers. Basic students rated the extent of their career information significantly higher than did academic students (Table 18).

Career Conceptualizations (Items 14 to 28)

Also on this cluster of items, stream resulted in as many significant differences as any other variable studied. The significance of stream on these items was confirmed by a MANOVA which produced an F value for stream that was significant at the .01 level of significance (Table 6).

Student responses on eight of these items varied with stream. Without exception, the direction of the eight differences was such as to indicate that academic students

Table 17

Students' Plans for After Graduation by Academic Stream

Plans	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
M.U.N.	215	43.8	4	6.3	7	3.1	226	29.0
College of Trades & Technology	60	12.2	17	27.0	36	15.9	113	14.5
College of Fisheries	23	4.7	7	11.1	12	5.3	42	5.4
Trades School	51	10.4	15	23.8	74	32.7	140	17.9
School of Nursing	7	1.4	0	0.0	0	0.0	7	.9
Police Academy	2	.4	0	0.0	1	.4	3	.4
Armed Forces	6	1.2	1	1.6	11	4.9	18	2.3
Other Institution	53	10.8	5	7.9	21	9.3	79	10.1
Get a Job	8	1.6	4	6.3	15	6.6	27	3.5
Take Some Time Off	10	2.0	1	1.6	8	3.5	19	2.4
Other	7	1.4	1	1.6	3	1.3	11	1.4
Undecided	49	10.0	8	12.7	38	16.8	95	12.2
Total	491		63		226		780	

Chi-square significant at .01.

Table 18

Students' Estimates of the Extent of Their Present Career Information by Academic Stream

Extent	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Very limited	6	1.2	0	0.0	3	1.3	9	1.1
Limited	36	7.3	6	9.7	19	8.3	61	7.8
Fair	284	57.7	26	41.9	104	45.2	414	52.8
Extensive	150	30.5	27	43.5	95	41.3	272	34.7
Very extensive	16	3.3	3	4.8	9	3.9	28	3.6
Total	492		62		230		784	

Tau c < .01.

possess more complex conceptualizations of careers and the process of career choice.

Students' Rating of the Course and Their Perceptions of Their Teachers (Items 29 and 30)

Responses to six of the fifteen parts of Items 29 and 30 varied significantly with academic stream. Two of these differences were significant at the .01 level of significance (Tau c) while the remaining four were significant at the .05

level. A MANOVA performed on these items using level and stream as independent variables resulted in a value for stream that was significant only at the .1 level (Table 12).

Compared to basic students, academic students:

(i) disagreed that their teachers knew which occupation was best for them (Tau c < .01),

(ii) disagreed that the course helped them decide on an occupation (Tau c < .01),

(iii) disagreed that their teachers were good teachers for the course (Tau c < .05),

(iv) disagreed that the course was a good source of occupational information,

(v) disagreed that the course reduced their anxiety about choosing an occupation, and

(vi) agreed that the course was poorly organized and confusing.

The existence of these two relationships was confirmed by univariate analyses of variance, both of which were significant at the .01 level.

Research Question #4: Do students who are taught Career Education 3101 by trained counsellors vary from those who are taught by teachers in:
(a) their response to traditional career questions,
(b) the level of complexity of their conceptualizations of careers and the career choice process, and
(c) their perceptions of the Career Education 3101 course and their teachers for the course?

The counsellor-teacher variable resulted in fewer

significant differences on questionnaire items than any other variable studied. Overall, whether students had been taught by a trained counsellor or a teacher resulted in only eight significant differences on questionnaire items.

Traditional Career Questions (Items 1 to 13)

On this section of the questionnaire the counsellor-teacher resulted in the fewest number of significant differences of all variables examined. Specifically, students taught Career Education by teachers, compared to those who were taught by counsellors, indicated that they had seriously considered pursuing significantly more careers (Table 19).

Career Conceptualizations (Items 14 to 28)

Again, on this cluster of items the counsellor-teacher variable resulted in the fewest number of differences of all the variables studied. Responses on only one of these items varied significantly (Tau c $<$ .01) with whether or not students were taught by counsellors or teachers. Students taught by counsellors varied significantly from those taught by teachers by agreeing that "the best way for my counsellor and/or teacher to help me in deciding on a career is to support and encourage me while I make up my own mind."

Students' Rating of the Course and Their Perceptions of Their Teachers (Items 29 and 30)

Once again, the counsellor-teacher variable resulted in

Table 19

Number of Careers Seriously Considered

Number of Careers	Students Taught by Counsellor		Students Taught by Teacher		Total	
	N	%	N	%	N	%
1	11	5.6	7	3.6	18	4.6
2	43	21.8	24	12.3	67	17.1
3	50	25.4	56	28.7	106	27.0
4	41	20.8	40	20.5	81	20.7
5	17	8.6	27	13.8	44	11.2
6	17	8.6	18	9.2	35	8.9
7	8	4.1	13	6.7	21	5.4
8	1	.5	2	1.0	3	.8
9	9	4.6	8	4.1	17	4.3
Total	197		195		392	

Tau c < .05.

The fewest number of significant differences, one, on this section of the questionnaire. On Item 30E significantly (Tau c < .01) more students taught by teachers, compared to those taught by counsellors, indicated that they agreed that the course had taught them what they had to know in order to get a job.

It should be pointed out that the proportion of significant differences on this clustor of items (1 out of 15) is

approximately equal to the proportion that would be expected to occur by chance.

Research Question #5: To what extent do students of high process teachers vary from those of low process teachers in their:
(a) responses to traditional career questions,
(b) conceptualizations of careers and the career choice process, and
(c) rating of both the Career Education 3101 course and their teachers for the course?

Although being taught by a counsellor or teacher appears to have affected student responses to the questionnaire items only to a very limited extent, the teaching style appears to be a more significant variable. The effects of extent of process is evidenced on all sections of the questionnnaire. Of special note, however, is the fact that this variable resulted in an outstanding number of significant differences on one particular section of the questionnaire. Extent of process varied significantly on thirteen of the fifteen parts of Items 29 and 30. No other variable discussed to this point, and only one to be discussed later, resulted in such a dramatically high proportion of significant differences on a particular cluster of items.

Traditional Career Questions (Items 1 to 13)

Extent of process resulted in few significant differences

on this section of the questionnaire. Specifically, students in high process classrooms, compared to those in low process classrooms, indicated that they felt there were significantly more career options available to them (Table 20) and also that they had seriously considered pursuing significantly more occupations (Table 21).

Table 20

Perceived Number of Career Options Available by Extent of Process Employed by Career Education 3101 Teacher

Number of Options	High Process		Medium Process		Low Process		Total	
	N	%	N	%	N	%	N	%
1 to 5	18	16.7	28	12.9	12	16.9	58	14.6
5 to 10	19	17.6	70	32.3	33	46.5	122	30.8
10 to 20	30	27.8	32	14.7	11	15.5	73	18.4
20 to 100	17	15.7	46	21.2	9	12.7	72	18.2
100 to 500	6	5.6	19	8.8	4	5.6	29	7.3
Over 500	18	16.7	22	10.1	2	2.8	42	10.6
Total	108		217		71		396	

Tau c < .01.

Table 21

Number of Careers Seriously Considered by Extent of Process Employed by Career Education 3101 Teacher

Number of Careers	High Process		Medium Process		Low Process		Total	
	N	%	N	%	N	%	N	%
1	7	6.5	8	3.8	3	4.2	18	4.6
2	17	15.7	33	15.6	17	13.6	67	17.1
3	24	22.2	56	26.4	26	36.1	106	27.0
4	23	21.3	45	21.2	13	18.1	81	20.7
5	12	11.1	28	13.2	4	5.6	44	11.2
6	12	11.1	17	8.0	6	8.3	35	8.9
7	6	5.6	14	6.7	1	1.4	21	5.4
8	0	0.0	3	1.4	0	0.0	3	.8
9	7	6.5	8	3.8	2	2.8	17	4.3
Total	108		212		72		392	

Tau c < .05.

The extent of process variable also varied significantly with student responses indicating the extent of their present knowledge about careers (Table 22). Students of high process teachers, compared to those of low process teachers, indicated that they felt that the extent of their knowledge of careers was significantly more extensive.

Table 22

Students' Estimates of the Extent of Their Present Career Knowledge by Extent of Process Employed by Teacher of Career Education 3101

Extent of Knowledge	High Process		Medium Process		Low Process		Total	
	N	%	N	%	N	%	N	%
Very limited	0	0.0	2	.9	1	1.4	3	.7
Limited	4	3.6	14	6.3	7	9.5	25	6.1
Fair	44	39.6	92	41.4	38	51.4	174	42.8
Extensive	54	48.6	104	46.8	26	35.1	184	45.2
Very extensive	9	8.1	10	4.5	2	2.7	21	5.2
Total	111		222		74		407	

Tau c < .01.

Career Conceptualizations (Items 14 to 28)

Responses to four of these fifteen items varied significantly with the extent of process employed by the teacher. Compared to lower process students, students of high process teachers:

(i) disagreed that there is only one right career for a person (Tau c < .01),

(ii) disagreed that it is the job of counsellors and/or teachers to guide students into the right occupations (Tau c < .01),

(iii) disagreed that "there is no such thing as a single right career. All careers have both advantages and disadvantages" (Tau c < .01), and

(iv) agreed that there were many occupations that were suitable for them (Tau c < .01).

Three of the four significant differences listed above indicate that students taught by high process teachers tend to demonstrate more complex conceptualizations of careers than do students of low process teachers.

Students' Rating of the Course and Their Perceptions of Their Teachers (Items 29 and 30)

As mentioned earlier, on these two items on which students rated the value of the course to them and also indicated their perceptions of their Career Education 3101 teacher, the extent of the process employed by their teachers resulted in significant differences on 13 out of a possible 15 instances. Also, in one of the instances in which significance was not achieved, the obtained value fell only very slightly short of significance at the .05 level.

The dramatic number of significant differences on these items with extent of process corresponds with an even more dramatic number of significant differences with the rural-urban classification of students. Responses on 14 of these 15 items varied significantly with the rural-urban variable. On all 14 items rural students, compared to urban students, rated the course and/or their teachers for the course more favourably.

Because of unequal distributions of these two variables (e.g., 68.9% of the low process students were urban) it was not possible to conclude that the apparent effects of each of these variables were independent of the other. It was possible that a confounding effect existed. To check for the existence of such a confounding effect and to establish the independence of extent of process and the rural-urban variable, a multi-variate analysis of variance was performed on these items, using these two variables as independent variables. The obtained value for each was significant at the .01 level. Also, a significant interactive effect resulted (Table 23).

Table 23

MANOVA for Items Involving Rating of Career Education 3101 and Teachers of the Course (29 and 30) Using the Rural-Urban Variable and Extent of Process as Independent Variables

Effect	F	df	p<
Extent of process by rural-urban classification	2.65	45	.000
Rural-Urban classification	2.95	30	.000
Extent of process	1.96	30	.002

Nine of the thirteen significant (Tau c) differences that resulted were significant at the .01 level, while the remaining four were significant at the .05 level. Of particular importance is the observation that, without exception, the direction of all the significant differences on this section of the questionnaire was such as to indicate that students of high process teachers were more positive toward both the Career Education 3101 course and their teachers for the course.

Research Question #6: How do males differ from females in their:
(a) responses to traditional career questions,
(b) perceptions of careers and career choice, and
(c) rating of Career Education 3101 and their Career Education 3101 teachers?

Overall, responses on 20 of the questionnaire items varied significantly with sex. Although this variable was significant with at least several items from all sections of the questionnaire, its effects on questionnaire items were not evenly distributed. Instead, sex resulted in significant differences with clusters of items, forming distinctive trends.

Traditional Career Questions (Items 1 to 13)

Only minor sex differences were revealed by this cluster of items. Only one other variable, the counsellor-teacher variable, resulted in fewer significant differences on these items.

Significantly (Table 24) more females than males indicated that they had decided on an occupation that they planned to pursue after high school. As indicated below, 71.8% of females, compared to 61.8% of males, have made an occupational choice.

Table 24

Percentage of Males and Females Having Made an Occupational Choice

Has Choice Been Made?	Male		Female		Total	
	N	%	N	%	N	%
Yes	236	61.8	293	71.8	529	67.0
No	146	38.2	115	28.2	261	33.0
Total	382		408		790	

Chi-square < .01.

Sex also varied significantly (Tau c < .01) with an item requesting that students indicate how they felt about their occupational choice. Of the students who indicated that they had decided on an occupation, 94.0% of males, compared to 90.0% of females, responded that they felt "very confident" or had "only minor concerns" (Table 25).

Table 25

Feeling about Occupational Choice by Sex

Feeling	Male		Female		Total	
	N	%	N	%	N	%
Very confident	106	45.5	115	41.1	221	43.1
Minor concerns	113	48.5	137	48.9	250	48.7
Nonconfident	7	3.0	21	7.5	28	5.5
Very worried	7	3.0	7	2.5	14	2.7
Total	233		280		513	

Tau c < .05.

Finally, males and females also varied significantly (Chi-square $< .01$) in their plans for after graduation. A higher proportion of females than males plan to attend Memorial University, the College of Trades and Technology, a trades school or a school of nursing. On the other hand, a higher proportion of males plan to attend the College of Fisheries or join the Armed Forces (Table 26).

Career Conceptualizations (Items 14 to 28)

Sex resulted in more significant differences on this cluster of items than did any other variable studied. Of even greater significance is the fact that the direction of all the differences on these items was such as to indicate that females have more appropriate conceptualizations of careers than do males. Since a higher proportion of females (48.7%) than males (27.6%) are categorized as urban, and since both females and urban students tended to demonstrate more appropriate conceptualizations of careers, it was possible that a confounding effect existed. A MANOVA was thus performed on this cluster of items using sex and the rural-urban as independent variables in an effort to establish the independence of these two variables. The resulting F values for both variables were significant at the .01 level of significance. No interactive effect resulted (Table 27).

Also, because a higher proportion of females were in Level III, as opposed to lower levels, and because a higher

Table 26

Students' Plans for After Graduation by Sex

Plans	Male		Female		Total	
	N	%	N	%	N	%
M.U.N.	104	27.6	123	30.3	227	29.0
College of Trades & Technology	47	12.5	66	16.3	113	14.4
College of Fisheries	41	10.9	1	.2	42	5.4
Trades-School	61	16.2	79	19.5	140	17.9
School of Nursing	0	0.0	7	1.7	7	.8
Police Academy	2	.5	1	.2	3	.4
Armed Forces	15	4.0	3	.7	18	2.3
Other Institution	30	8.0	49	12.1	79	10.1
Get a Job	15	4.0	13	3.2	28	3.6
Take Some Time Off	9	2.4	10	2.5	19	2.4
Other	6	1.6	5	1.2	11	1.4
Undecided	47	12.5	49	12.1	96	12.3
Total	377		406		783	

Chi-square < .01.

Table 27

MANOVA for Career Conceptualization Items (14 to 28) Using Sex and the Rural-Urban Variable as Independent Variables

Effect	F	df	p <
Sex by rural-urban variable	1.28	30	.149
Rural-urban variable	1.99	30	.001
Sex	3.02	15	.000

proportion of females were in the academic stream as opposed to the basic stream, two additional multivariate analyses of variance were performed on Items 14 to 28 in an effort to establish the significance of sex, independent of the effects of the other two variables. For one MANOVA, sex and level acted as the independent variables, while for the second, sex and stream were the independent variables. The first MANOVA resulted in an F value for sex that was significant at the .01 level (Table 28). The SPSS MANOVA procedure failed to produce an overall F value for sex for Items 14 to 28 (Table 29), but univariate analyses of variance confirmed eight of the Tau c relationships that existed on this section of the questionnaire.

Table 28

MANOVA for Career Conceptualization Items (14 to 28) Using Sex and Level as Independent Variables

Effect	F	df	p <
Sex by level	1.48	15	.105
Level	1.81	15	.029
Sex	3.57	15	.000

Table 29

MANOVA for Career Conceptualization Items (14 to 28) Using Sex and Stream as Independent Variables

Effect	F	df	p <
Sex by stream	*	*	*
Stream	2.01	30	.001
Sex	*	*	*

*Eigenvalue problem failed to converge.

Students' Rating of the Course and Their Perceptions of Their Teachers (Items 29 and 30)

Responses to only two parts of these items varied significantly with sex. Only one other variable, the counsellor-teacher variable, resulted in fewer significant differences on this section of the questionnaire. Males, compared to females:

(i) disagreed that the course helped them determine their interests, values and abilities (Tau c $<$ .05), and

(ii) agreed that the only value of the course was as a 3000 level credit (Tau c $<$ .05).

Research Question #7: To what extent does students' rural-urban classification vary with their:
(a) responses to traditional career questions,
(b) perceptions of careers and the process of career choice, and
(c) perceptions of the Career Education 3101 course and their teachers for the course?

As described in detail earlier, three categories of students were identified based on demographic factors, an urban group, a rural group and a group which was neither truly rural or urban.

Overall, the rural-urban (or community size) variable resulted in significance on as many items as any other variable studied; the academic stream variable resulted in an equal number of significant differences. It should be

pointed out, however, that the significant differences with stream were more evenly distributed throughout the questionnaire. The large number of significant differences with community size is due, in large part, to a very high proportion of significant differences on one section of the questionnaire. Community size resulted in 14 significant differences out of a possible total of 15 on Items 29 and 30.

Traditional Career Questions (Items 1 to 13)

Responses to six of these items varied significantly with community size. Specifically, student responses indicating if they had decided on an occupation varied significantly (Chi-square < .01) with the rural-urban variable. However, an approximately equal proportion of urban (75.3%) and rural (73.0%) students indicated that they had made an occupational choice. The statistical difference on this item appears to have resulted from the much lower proportion of students (44.6%) in the intermediate classification (e.g., not truly urban or rural) who indicated that they had decided on an occupation (Table 30).

Student responses indicating the number of careers they had seriously considered pursuing also varied significantly (Tau c < .05) with community size. Table 31 indicates that rural students, compared to urban students, indicated that they had considered more careers. For example, 33.4% of rural

Table 30

Number and Percentage of Students by Demography Who Have Decided on an Occupation

Has Choice Been Made?	Urban		Rural-Urban		Rural		Total	
	N	%	N	%	N	%	N	%
Yes	122	75.3	62	55.4	98	73.1	282	69.1
No	40	24.7	50	44.6	36	26.9	126	30.9
Total	162		112		134		408	

Chi-square < .01.

Table 31

Number of Careers Seriously Considered by Demography

Number of Careers	Urban		Rural-Urban		Rural		Total	
	N	%	N	%	N	&	N	%
1	10	6.4	5	4.7	3	2.8	18	4.6
2	33	21.2	13	12.1	21	16.3	67	17.1
3	40	25.6	31	29.0	35	27.1	106	27.0
4	31	19.9	23	21.5	27	20.9	81	20.7
5	16	10.3	14	13.1	14	10.9	44	11.2
6	11	7.1	9	8.4	15	11.7	35	8.9
7	5	3.2	8	7.5	8	6.2	21	5.4
8	1	.6	1	.9	1	.8	3	.8
9	9	5.8	3	2.8	5	3.9	17	4.3
Total	156		107		129		392	

Tau c < .05.

students listed five or more careers that they had seriously considered pursuing, compared to 26.9% of urban students.

Responses indicating students' plans for after graduation varied significantly with the demographic variable. Two of the larger discrepancies include 7.5% of rural students, compared to .6% of urban students, planning to attend the College of Fisheries and 30.1% of rural students, compared to 17.9% of urban students, planning to attend a trades school (Table 32).

Finally, rural and urban students varied significantly (Tau c < .01) in their estimates of the present extent of their career information. Rural students, compared to urban students, rated their career knowledge significantly higher. For example, 60.5% of rural students, as opposed to 37.2% of urban students, rated the extent of their career information as extensive or very extensive (Table 33).

Career Conceptualizations (Items 14 to 28)

Student responses on six of these items varied significantly with the rural-urban classification of students. All six differences were significant at the .01 level. Due to the unequal distribution of sex with this variable (48.7% of females were urban, compared to 27.6% of males), a multivariate analysis of variance was performed on these items using sex and the rural-urban variable as independent variables. The MANOVA was made even more necessary by the fact that, on these

Table 32

Students' Plans for After Graduation by Demography

Plans	Urban		Rural-Urban		Rural		Total	
	N	%	N	%	N	%	N	%
M.U.N.	36	22.2	31	27.9	24	18.0	91	22.4
College of Trades & Technology	34	21.0	15	13.5	24	18.0	73	18.0
College of Fisheries	1	.6	4	3.6	10	7.5	15	3.7
Trades School	29	17.9	16	14.4	40	30.1	85	20.9
School of Nursing	5	3.1	1	.9	0	0.0	6	1.5
Police Academy	2	1.2	0	0.0	0	0.0	2	.5
Armed Forces	2	1.2	4	3.6	2	1.5	8	2.0
Other Institution	22	13.6	13	11.7	11	8.3	46	11.3
Get a Job	7	4.3	4	3.6	5	3.8	16	3.9
Take Some Time Off	8	4.9	5	4.5	1	.8	14	3.4
Other	2	1.2	2	1.8	0	0.0	4	1.0
Undecided	14	8.6	16	14.4	16	12.0	46	11.3
Total	162		111		133		406	

Chi-square $< .01$.

Table 33

Students' Estimates of the Extent of Their Career Knowledge

Extent	Urban		Rural-Urban		Rural		Total	
	N	%	N	%	N	%	N	%
Very limited	3	1.9	0	0.0	0	0.0	3	.7
Limited	11	6.8	7	6.3	7	5.2	25	6.1
Fair	87	54.0	41	36.7	46	34.3	174	42.8
Extensive	58	36.0	55	49.1	71	53.0	184	45.2
Very extensive	2	1.3	9	8.0	10	7.5	21	5.2
Total	161		112		134		407	

Tau c < .01.

items, females differed from males in the same direction that urban students differed from rural students (e.g., both demonstrated more complex or appropriate conceptualizations of careers). The values resulting from the MANOVA confirmed the significance of both variables; each was significant at the .01 level (Table 27).

The direction of the differences on all six items on which significance was achieved was such as to indicate that urban students have more complex or appropriate conceptualizations of careers and the career choice process than rural students.

Students' Rating of the Course and Their Perceptions of Their Teachers (Items 29 and 30)

The rural-urban variable resulted in more significant differences on this cluster of items than did any other variable. It was significant on 14 of a total of 15 parts of Items 29 and 30. What is even more outstanding about this result is that the direction of all 14 relationships is such as to indicate that urban students, compared to rural students, were more critical of both their Career Education 3101 teacher and the course itself. As mentioned earlier, because extent of process employed by the teacher also resulted in a large number of significant differences on these items, a multivariate analysis of variance was performed using extent of process and the demographic variable as independent variables. The significance of both variables on Items 29 and 30 was confirmed by values obtained on the MANOVA, both of which were significant at the .01 level (Table 23). Also, univariate analyses of variance confirmed ($F < .05$) 13 of the 14 significant differences on this section of the questionnaire.

Research Question #8: To what extent do older students vary from younger students in their:
(a) responses to traditional career questions,
(b) conceptualizations of careers and the process of career choice, and
(c) perceptions of both Career Education 3101 and their teachers for the course?

Overall, age resulted in relatively few significant differences on questionnaire items. Only one other variable, the counsellor-teacher variable, resulted in fewer.

Traditional Career Questions (Items 1 to 13)

The effects of age on student responses appear to be more pronounced on this cluster of items than on any other section of the questionnaire. One-half of all significant differences with age occurred on this section.

Specifically, significantly (Chi-square $< .01$) more older students than younger students indicated that they had decided on an occupation. Table 34 indicates that 72.9% of 18-year-olds, compared to 49.5% of 16-year-olds, have decided on an occupation.

Student responses indicating how they felt about their occupational choice also varied significantly (Tau c $< .05$) with age. Older students indicated that they felt more confident about their choice than did younger students (Table 35).

Finally, the degree to which careers seriously considered by students were similar in terms of interest varied significantly with age. Older students, compared to younger students, tended to have considered careers which exhibited more consistency of interests (Table 36).

Table 34

Number and Percentage of Students by Age Who Have Decided on an Occupation

Has Choice Been Made?	Age 15		16		17		18		19		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Yes	12	60.0	50	49.5	226	66.5	194	72.9	42	75.0	524	66.9
No	8	40.0	51	50.5	114	33.5	72	27.1	14	25.0	259	33.1
Total	20		101		340		266		56		783	

Chi-square < .01.

Table 35

Students' Feelings about Occupational Choice by Age

Feeling	Age										Total	
	15		16		17		18		19			
	N	%	N	%	N	%	N	%	N	%	N	%
Very confident	6	50.0	12	24.5	92	41.8	91	48.7	18	43.9	219	43.0
Minor concerns	5	41.7	33	67.3	112	50.9	80	42.8	18	43.9	248	48.7
Non-confident	1	8.3	2	4.1	12	5.5	10	.5	3	7.3	28	5.5
Very worried	0	0.0	2	4.1	4	1.8	6	3.2	2	4.8	14	2.8
Total	12		49		220		187		41		509	

Tau c < .05.

Table 36

Consistency of Interests Demonstrated by Occupations Considered

Consistency	Age 15		16		17		18		19		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Very consistent	0	0.0	5	5.9	29	9.4	41	17.2	12	25.5	87	12.5
Consistent	4	26.7	29	34.1	95	30.6	83	34.7	14	29.8	225	32.3
Inconsistent	7	46.7	34	40.0	130	41.9	77	32.2	18	38.3	266	38.2
Very inconsistent	4	26.7	17	20.0	56	18.1	38	15.9	3	6.4	118	17.0
Total	15		85		310		239		47		696	

Tau c < .01.

Career Conceptualizations (Items 14 to 28)

Age resulted in significant differences on only two of the items of this section of the questionnaire. Surprisingly, older students demonstrated more simplistic conceptualizations of careers. Older students, compared to younger students:

(i) agreed that generally, there is only one right career for a person (Tau c < .05), and

(ii) agreed that people do not have much say in their careers (Tau c < .05).

Students' Rating of the Course and Their Perceptions of Their Teachers (Items 29 and 30)

Older students varied significantly from younger students in their responses to five parts of these items. A multivariate analysis of variance performed on the 15 parts of Items 29 and 30 using level and age as independent variables did not result in a value for age that was significant. Rather than totally ignore the five differences that were significant because of the conflicting evidence, it was decided to cite only the differences that were significant (Tau c) at the .01 level, and to ignore the remaining differences that were significant at only the .05 level of significance. Although this somewhat reduces the risk of Type I error, the results of these three items should still be interpreted with an appropriate degree of caution. It is felt, however, that this is preferable to totally ignoring what could be legitimate differences.

Responses indicated that older students, compared to younger students:

(i) disagreed that their teachers understood how they felt about making an occupational choice (Tau c < .01),

(ii) disagreed that their teacher appeared to enjoy teaching the course (Tau c < .01), and

(iii) disagreed that their teacher was a good teacher for the course (Tau c < .01).

Part II: Results of Teacher Questionnaire

The purpose of the teacher questionnaire was twofold. One function of this questionnaire was the collection of data about the teaching techniques employed by teachers of Career Education 3101. This data was then used to classify teachers into three categories depending upon the extent of process they employed during their teaching of the course. The extent of process served as one of the eight variables (the results of which were previously discussed in detail in Part I of this chapter) that were examined by this study.

A second function of the teacher questionnaire was to gather additional information from teachers about their perceptions of the course, their inservicing for the course, resources available to them, their evaluation of the texts and student manuals and also their overall comments, recommendations, and suggestions.

A total of 41 teachers completed the teacher questionnaire, 21 of whom were trained counsellors. Also, 21 of the respondents were teachers of students who completed the student questionnaire.

Thirty-three of the teachers (80.5%) indicated that they thought that Career Education 3101 shared equal status with other one-credit courses. Also, 33 of the teachers (80.5%) felt that the course was supported by other teachers. Thirty-five teachers (85.4%) felt that the course was supported by administrators, while the majority of teachers (63.4%) were not sure if it was supported by parents. A significant difference (Tau c $<$ .05) between counsellors and teachers resulted on this last item. Significantly more counsellors (47.6%) than teachers (14.3%) felt that the course was supported by parents.

Twenty-six (63.4%) of the 41 teachers indicated that they had volunteered to teach Career Education 3101. Similarly, 27 (65.9%) teachers indicated that at the beginning of the school year, they felt "enthusiastic" or "very enthusiastic" about the prospect of teaching the course. When asked how they felt about the prospect of teaching Career Education 3101 again next year, the number of "enthusiastic" or "very enthusiastic" responses dropped to 23 (56.1%) while the number of those who were "very reluctant" to teach the course rose from 3 (7.1%) to 8 (19%).

Only 8 (19.5%) teachers indicated that they felt their students viewed the course as being of moderate or great value. Most teachers (63.4%) were undecided as to how their students felt about the course. This result compares to responses on Item 13 which indicated that 61% of teachers felt that Career Education was of moderate or great value to the students. Six teachers (14.6%) indicated that the course was of little value, while 10 (23.8%) remained undecided as to its value.

Counsellors and teachers varied significantly (Tau c < .01) in their estimates of the extent of their knowledge about career development theory. Table 37 indicates that a much higher proportion (71.4%) of counsellors than teachers (25.0%) indicated that their knowledge of career theory was good or comprehensive.

Significantly (Tau c < .01) more counsellors (92.5%) than teachers (50.0%) also indicated that they felt confident or very confident in their overall ability to teach the course (Table 38). However, when asked if Career Education 3101 should only be taught by teachers with formal training in the area of career development, there was no significant difference between the responses of counsellors and teachers. Overall, 15 respondents indicated that the course should only be taught by those with special training, while 14 (35.0%) felt that special training was not necessary. The remaining 11 were undecided. A much higher proportion of counsellors (45.0%)

Table 37

Teachers' and Counsellors' Estimates of the Extent of Their Knowledge of Career Development Theory

Estimate of Career Theory Knowledge	Teachers		Counsellors		Total	
	N	%	N	%	N	%
Limited	4	20.0	0	0.0	4	9.8
Average	11	55.0	6	28.6	17	41.5
Good	4	20.0	12	57.1	16	39.0
Comprehensive	1	5.0	3	14.3	4	9.8
Total	20		21		41	

Tau c < .01.

Table 38

Teachers' and Counsellors' Estimates of Their Confidence in Their Overall Ability to Teach Career Education 3101

Estimate of Confidence	Teachers		Counsellors		Total	
	N	%	N	%	N	%
Very nonconfident	0	0.0	0	0.0	0	0.0
Nonconfident	1	5.0	0	0.0	1	2.4
Neutral	9	45.0	1	4.8	10	24.4
Confident	8	40.0	10	47.6	18	43.9
Very confident	2	10.0	10	47.6	12	29.3
Total	20		21		41	

Tau c < .01.

than teachers (10.0%) was undecided on this question.

Only 9 (22.0%) teachers of Career Education 3101 rated their town/city as a good source of resource materials or persons that could be utilized in the teaching of the course. Also, only one of these 9 teachers taught in a rural community. Twenty-one teachers (51.2%) rated their town/city as a poor source of resource materials and persons.

Table 39 indicates that 20 teachers (53.8%) rated the texts that accompany the course as poor or very poor, 8 (20.5%) indicated that the texts were good, while no teachers felt that the texts were very good. The most frequent criticisms of the texts by teachers included:

(a) the inappropriateness of the texts for high school students,

(b) poor organization,

(c) the redundancy of much of the material, and

(d) the limitations resulting from too few topics being covered.

The student manual was rated somewhat more favorably than the texts. Thirteen teachers (31.7%) evaluated the manual as poor or very poor, while 16 teachers (39.0%) felt that it was good. As with the texts, no teachers indicated that it was a very good manual. The mean rating of the text on the 1-5 scale was 2.6, compared to 3.0 for the student manual. The most frequent criticisms of the manual were that it did not match the texts and that it had to be

Table 39

Teachers' Ratings of the Career Education 3101 Texts

Rating of Text	Number of Teachers	Percent	Cumulative Percent
Very poor	5	13.2	13.2
Poor	15	39.5	52.7
Neutral	10	26.3	79.0
Good	8	21.1	100.0
Very good	0	0.0	100.0
Total	38		

supplemented. Two teachers indicated that they were unaware that a student manual accompanied the course.

When asked to rate the assistance provided them by the Department of Education to help them teach the course a very high proportion (78.9%) of teachers indicated that such assistance was poor or very poor (Table 40). Only 4 teachers (10.5%) rated the assistance from the Department as being good. The mean ranking on the 1-5 scale was 1.9. Major criticisms of the Department of Education included:

(a) the Department moved too quickly to implement the course. More planning was necessary.

(b) workbooks should have been provided for all students.

Table 40

Teachers' Rating of the Assistance Provided by the Department of Education

Rating	Number of Teachers	Percent	Cumulative Percent
Very poor	14	36.8	36.8
Poor	16	42.1	78.9
Neutral	4	10.5	89.4
Good	4	10.5	100.0
Very good	0	0.0	100.0
Total	38		

(c) financial assistance should have been provided to enable schools to purchase resource materials.

Twenty-eight teachers (63.3%) indicated that they agreed or strongly agreed that Career Education 3101 should be a 2000 level course as opposed to a 3000 level course. Only seven teachers (17.7%) felt that it should remain as a 3000 level course. Comments on subsequent items tended to indicate that teachers are not opposed to Career Education 3101 being a 3000 level credit per se; rather they object to its being tested by a public examination.

Responses to Item 18 indicated that overall teachers

spent a mean of 48% of their Career Education time engaged in traditional lecturing as opposed to activities, discussions, field trips and other process oriented techniques. Table 41 indicates the number of teachers who utilized particular activities and the mean number of times that these activities were employed.

Responses of counsellors on this item varied significantly from those of teachers. Counsellors indicated that they spent significantly (Tau c < .01) less time lecturing than did teachers. Nineteen counsellors (90.5%) compared to 10 (50.0%) teachers, indicated that they spent 60% or less of their Career Education time engaged in lecturing. However, on Item 19 which requested all respondents to indicate which of a variety of activities they utilized and how often they used them, counsellors varied significantly on only one part. Responses to Item 19D indicated that significantly (Tau c < .01) more counsellors than teachers made use of role playing as an instructional technique.

Using the data obtained from Items 18 and 19 each teacher was assigned a number from one to three to indicate the overall extent of process employed by that teacher. Twelve (30.8%) were categorized as high process, 17 (43.6%) as medium process and 10 (25.6%) as low process. No significant differences between teachers and counsellors resulted on this variable.

On Item 20, 51.0% of teachers indicated that they were aware of career-related projects or activities taking place

Table 41

Activities Utilized by Teachers of Career Education 3101

Activity	Number of Teachers		Mean* Number of Times Activity was Used
	N	%	
Visits to employers, post-secondary institutions, etc.	21	53.8	1.9
Small group activities	37	94.9	15.9
Structured class discussion	35	89.7	35.0
Role-playing	20	51.3	4.5
Provided printed occupational information	35	92.1	36.2
Used CHOICES computer	6	15.4	Not Available
Used interest inventories	34	89.5	3.6
Used guest speakers	31	79.5	4.6

*This mean is the mean for the group of teachers who used the activity. It ignores those who did not use the particular activity (e.g., N used to calculate this mean was not 41, the total number of teachers, but only the number who indicated that they had used a certain activity).

in other subjects in their school other than Career Education 3101. Language, family studies, and religion were cited as examples of other subjects.

Twenty-two teachers (57.9%) indicated that they were aware of career-related activities available to students in their school other than through Career Education 3101 or other subjects. Examples of such activities included career days, guest speakers, visits to post-secondary institutions, and individual interviews.

Item 22 requested that teachers indicate what they felt to be the greatest weakness of Career Education 3101. Ranked below, beginning with the most frequently cited, are the major criticisms of the course as perceived by the teachers:

(i) Poor textbooks.

(ii) Lack of resources.

(iii) Evaluation of student success by a public examination.

(iv) Insufficient time available as a one-credit course to adequately cover the required topics.

(v) Lack of resource persons.

(vi) Being offered too late to be of maximum value to students.

(vii) Negative attitude of students toward the course.

(viii) Lack of teacher time to prepare properly to teach the course.

(ix) Student workbooks are not available for all students.

Numerous other criticisms were provided; however, compared to those already listed above, they were of a minor nature in that each was cited by only one or a couple of teachers.

Item 23 provided teachers an opportunity to indicate what they felt was the greatest advantage or most positive feature of the course. Listed below, again beginning with the most frequently cited responses, are the major advantages of Career Education 3101 as seen by the teachers:

(i) The course provided students an opportunity to look at themselves and explore their abilities, interests, etc.

(ii) Career Education 3101 is a good source of career and occupational information.

(iii) The course teaches skills needed to get a job.

(iv) It provides a structured approach to career exploration.

Teachers' recommended suggestions for improvement (Item 24) were, for the most part, a reflection of their criticisms provided on Item 22. No other major weakness, other than those listed in Item 22, came to light, and as such, detailed discussion of the responses to this item is felt to be unnecessary.

Also on Item 25, which provided teachers a final opportunity to make observations, suggestions, criticisms, etc., no other major weakness or suggested improvement was evident. The most frequent comment was that student workbooks be made available for all students.

The remainder of the questionnaire, from Item 26 to the end, was completed only by noncounsellors. Responses to the first of these items (Item 26) revealed that only 12 of these 20 teachers had completed courses which they considered as qualifications for teaching Career Education 3101.

Six teachers (31.6%) indicated that they had received no inservicing in Career Education 3101. Thirteen (68.4%) received one-half to two days of inservicing, while one teacher received more than two days. All 13 teachers who had inservicing were inserviced by a school board coordinator, and 5 of them received additional inservicing from the Department of Education and/or Memorial University.

The teachers who did receive inservicing tended to rate it poorly. On a scale of 1-5, with 5 representing "of great value", only 1 teacher rated it as high as 4, "of moderate value."

Responses to Item 30 indicated that 14 (70%) of the teachers who were not trained counsellors did make use of the services of a counsellor while teaching Career Education 3101. All 14 of these teachers used a counsellor as a source of career information, 13 used a counsellor as a source of interest inventories, values exercises, etc. and 9 teachers used a counsellor as a source of ideas about instructional techniques. Few teachers made use of a counsellor as a guest speaker (3) or as a source of career development theory (4).

The frequency of meetings between the teachers and counsellors to discuss topics related to Career Education were evenly distributed between "every several months," "monthly," and "every two weeks" (Item 32). Only one teacher reported meeting with a counsellor on a weekly basis.

Ten of the 14 teachers (71.4%) who received assistance

from counsellors in teaching Career Education rated such help as being of moderate or great value. Only one teacher felt that the counsellor's assistance was of little value, while three others were undecided or neutral.

Of the six teachers who did not utilize the services of a counsellor, five reported that no counsellor services were available to them. Of those who did use a counsellor's help, three reported that their school had a full-time counsellor, five had a part-time counsellor and five had a counsellor available only at the school board level.

CHAPTER V

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Introduction

Chapter V consists of a presentation of the major conclusions, implications and recommendations of the present study. It has been divided into two major sections. The first section presents a summary of the major findings, interpretations of these findings and a discussion of the resulting implications. This first section is presented in three subsections, each corresponding to one of the sections of the Student Questionnaire. The latter part of Chapter V involves a presentation of recommendations arising from the major findings and implications. The recommendations presented are of two types, recommendations for programming and recommendations for further research.

Conclusions, Interpretations and Implications

Traditional Career Questions

Using the number of significant differences between particular variables and questionnaire items, it appears that the three major variables, in order of importance, that

influenced student responses on the first section of the questionnaire (traditional career questions) were level, stream and the course-noncourse variable. A very brief review of the major significant differences with the course-noncourse variable indicates that students who completed the course, compared to those who did not,:

(i) have seriously considered pursuing more career options,

(ii) have more consistent interests as expressed by the occupations they have considered pursuing,

(iii) feel that their knowledge of careers is more extensive, and

(iv) have different plans for after graduation (e.g., an appreciably lower proportion plan to attend Memorial University).

It is quite possible that the lower proportion (21.6%) of course students who plan to attend Memorial is a better reflection of reality than that demonstrated by noncourse students, 36.3% of whom plan to attend Memorial.

Hennebury (1980) reported results that were inconsistent with (iii) above. He found no significant difference between Creating a Career (now Career Education 3101) students and control students in their estimates of the extent of their knowledge about careers. This was despite the fact that control students scored significantly lower than course students on a career knowledge instrument. Those who knew less felt that they knew as much as those who knew more. Results of the present study contradict this finding. Estimates of Career Education 3101 students of the extent

of their knowledge of careers were significantly higher than those of noncourse students. Wiseman (1983), commenting on Hennebury's finding, maintained that it is not sufficient that students have a good knowledge of careers; they must also know and feel confident that such is actually the case. As mentioned above, students who completed Career Education 3101 do feel that their knowledge of careers is more extensive than do students who did not complete the course.

A result of the present study which is somewhat consistent with Hennebury's finding, above, is the fact that the estimates of basic or general students as to the extent of their career knowledge were significantly higher than those of academic students. It is interesting that basic students, who probably have less extensive career knowledge than academic students, feel that their knowledge of careers is more extensive than do academic students. This finding can possibly be explained by a consideration of the volume of career information that is relevant to both of these groups of students. Since basic students feel they are limited in the number of career options that are available to them (Item 4, Tau c $< .01$), they possibly consider much occupational information to be irrelevant because they do not qualify for a vast number of occupations. For academic students, on the other hand, the amount of relevant occupational information is much greater because of their higher academic qualifications. The higher estimates of basic students' extent of career

information might be due to the fact that they, compared to academic students, might feel that they have mastered a higher proportion of the career information that is relevant to them. Academic students, faced with many more options and much more occupational information may feel that they have much more yet to learn and thus may have tended to rate the extent of their information as significantly lower for this reason. Academic students' lower estimates of the extent of their knowledge about careers is consistent with their responses on another item on which they ranked "provide as much information as possible about different occupations" significantly higher than did basic students.

Basic students also varied significantly from academic students by indicating that they felt more confident about their occupational choices. Again, this result need not be viewed as unexpected. Assuming that basic students are at a lower point along the continuum of intellectual development, this finding can be explained as being totally congruent with the cognitive model of career development. At lower stages of intellectual development, individuals have no dissonance associated with making an occupational choice due to an absolute reliance on the suggestions of external authorities. The possibility of right/wrong decisions has not yet been recognized and thus the anxiety that would result from this realization does not exist (Knefelkamp and Slepitza, 1976, p. 54). Support for this interpretation is provided by

student responses to the career conceptualization items on which basic students consistently demonstrated more simplistic conceptualizations of careers.

Students' plans for after graduation varied significantly with sex. Examination of the specific plans of males and females provides insight into the reason for this sex difference. It appears that males plan to pursue occupations which have traditionally been viewed as male roles, while females plan to pursue traditional female roles. For example, 41 males, compared to only 1 female, plan to attend the College of Fisheries and 15 males, compared to only 3 females, plan to join the Armed Forces. Also, 7 females, as opposed to no males, plan to attend a school of nursing.

A totally unexpected result was the finding that significantly more fathers of students taught by counsellors, compared to fathers of students taught by teachers, were employed (Appendix A, Table H). Certainly no causal relationship between these two variables could be entertained. This difference must have been due to chance or to the confounding effects of some other variable. A search for this confounding variable revealed that a higher proportion of the counsellors were located in urban centers. Also, since a higher proportion of urban fathers than rural fathers were employed, it appears reasonable to assume that the demographic variable is a more likely contributor to this observed differences than is the counsellor-teacher variable.

Results of the course-noncourse variable, extent of process variable, and the counsellor-teacher variable are of particular importance since it is over these variables that we, as educators, have some degree of control. Results of the traditional career questions indicate that efforts to manipulate the counsellor-teacher variable are unwarranted since, of all the variable studied, this variable resulted in the fewest number of significant differences. Manipulation of the remaining two variables appears to hold much more promise as a means of influencing students' positions on many of the variables assessed by the questionnaire items. Students enrolled in Career Education 3101 and/or students of high process teachers varied significantly from their noncourse counterparts and from students of low process teachers on a majority of the traditional career questions. Also, the direction of the differences was such that course students and students of high process teachers tended to demonstrate more positive positions on the various questions (e.g., they had seriously considered pursuing more careers, their interests were more defined, and they had higher estimates of the extent of their career information).

Worthy of note are certain items on the first section of the questionnaire, responses to which did not vary significantly with taking Career Education 3101. Course and noncourse students did not vary on whether or not they had decided on an occupation, how they felt about their

choice, the number of career options they perceived to be available to them, and whether or not they planned to continue their education.

It should be pointed out, however, that the lack of significant differences on these items need not necessarily imply any weakness or failure of the Career Education 3101 course. Traditionally, the making of a specific occupational choice by high school students has been viewed as a positive event and a progressive step toward obtaining meaningful employment. Interpreted from a cognitive developmental approach, however, this same event might not be viewed as favorably. According to the cognitive developmentalists, a career is a life-long process, rather than a single decision made at an early age. Also, recent research (Knefelkamp and Slepitza, 1976) indicates that students at this early stage of their lives, because of their relatively simplistic conceptualizations of careers and authority figures and their predominantly external locus of control, are unable to make appropriate career choices. Delaying the decision-making process until such time that students have developed qualitatively more complex ways of viewing careers and the career-choice process is viewed as more desirable than making a premature, inappropriate choice.

Similarly, the fact that Career Education 3101 students do not feel more confident about their occupational choices or the prospect of making a choice need not be viewed

negatively. In fact, cognitive developmental theory would maintain that a high degree of uncertainty and ambivalence associated with career choice at this stage of a person's development is evidence that more complex conceptualizations are being adopted. For example, it could possibly indicate that the notion of a single right career is being replaced by an acknowledgement of the fact that many possible careers exist, all of which have relative positive and negative features. According to cognitive theory, students faced with this relative nature of career choice, as opposed to the absolutist view of choosing the right career, should tend to demonstrate more ambivalence and uncertainty. Results of this study indicate that Career Education 3101 students were more concerned or worried about making a career choice or the prospect of making such a choice, but the relationships were not statistically significant. However, Hennebury (1980) reported that students, when asked how they felt about the prospect of getting a job, tended to respond with "fairly sure" on a pre-test instrument and with "not too sure" on the post-test measurement with the same instrument. When interpreted from the perspective of the cognitive developmentalists this increased ambivalence is viewed as a positive feature and as support for the cognitive theories of career development.

Career Conceptualizations

On the second section of the Student Questionnaire (the career conceptualization items) sex and academic stream, in that order, resulted in the greatest numbers of significant differences, while the course-noncourse variable and the demographic variable resulted in a somewhat smaller number of significant differences.

While the results of the first section of the questionnaire sometimes tended to be somewhat inconsistent with particular variables (e.g., more females than males have made an occupational choice, but more males than females feel confident about their occupational choices), the trends on the second section are much more distinct. Course students, compared to noncouse students; Level III students, compared to lower level students; academic students, compared to basic students; students of high process teachers, compared to students of low process teachers; females, compared to males; and urban students, compared to rural students; demonstrated more complex conceptualizations of careers.

Young's (1981) contention that discussion groups, interviewing workers, case studies and other activities help foster the development of more complex conceptualizations of careers was supported by results of this study. For Young, such activities challenge students with opinions, beliefs and information that are discrepant with their own conceptualizations of careers. Students' attempts to eliminate the

resulting disequilibrium by means of assimilation and accommodation eventually result in adoption of more complex conceptualizations. In the present study, high process students varied significantly from low process students on a number of the career conceptualization items, the direction of all differences being such that high process students demonstrated more complex conceptualizations.

A major tenant of the cognitive developmental career theory of Knefelkamp and Slepitza (1976) is that individuals progress from an external locus of control to a predominantly internal locus of control. On all items, except one, which attempted to assess students' locus of control, Career Education 3101 students varied significantly from noncourse students by demonstrating a more internal locus of control. The one exception to this distinct trend was Item 20 on which course students, compared to noncourse students, agreed that "vocational questionnaires ... are able to tell me which career is right for me." Such a position on this item represents a simplistic conceptualization of the career choice process as well as a reliance on external factors as determinants of one's career choice. This inconsistent finding can possibly be explained by the differential exposure of the two groups of students to vocational questionnaires (e.g., interest inventories). For most students, Career Education 3101 involved the completion and interpretation of interest inventories. Undoubtedly,

teachers of the course stressed the value and importance of these inventories as tools to be used in the process of career choice. The positive rating of such questionnaires by Career Education 3101 students can probably be viewed as a reflection of their teachers' positive comments on such instruments. Noncourse students, on the other hand, having had little or no exposure to these inventories, would not be expected to share the same positive opinion of them as do students of Career Education 3101.

An interesting result of this study was that older students did not demonstrate more complex conceptualizations of careers than did younger students. In fact, on 2 of the 15 career conceptualization items on which differences resulted with age, younger students exhibited more appropriate perceptions of careers. Age, per se, does not appear to be a determinant of students' career conceptualizations.

If one looks instead at students' level in school, then a different picture emerges. On 5 of the 15 items Level III students varied significantly from lower level students by demonstrating more appropriate perceptions of careers and the career choice process. Even though Level III students tend to be older than lower level students, there appears to be some factor other than age that contributed to the different responses of these two groups of students. It is probable that the feature that enables Level III students to outperform lower level students is their additional year/s

of formal education. Such education must undoubtedly have challenged their intellectual abilities to a greater extent than previous grades and questioned many of their simplistic conceptualizations by presentation of alternative, more complex views. This would be expected to result in students who think in qualitatively different ways from lower level students. These students would thus be expected to demonstrate more complex conceptualizations on the questionnaire items.

Support for this particular interpretation is provided by recent research. Strange (1978, cited in Strange and King, 1981) reported that his seniors scored higher on his measure of reflective judgement than did freshmen even when seniors and freshmen were the same age. Education seemed to be a more important factor than age. Strange and King (1981) studied the main effects of maturation (chronological age differences) and level of education on students' degree of intellectual development. A statistically significant difference with level of education, but not with age, led Strange and King to conclude that "whether a student is traditional age or adult with his/her respective class level apparently does not make a difference in terms of Reflective Judgement Score" (p. 287). Finally, Welfel (1982a) reported a significant main effect for year in college on Reflective Judgement Scores and concluded that the effects of higher levels of education are greater than what could be expected by maturation alone (p. 495).

The finding that academic stream proved to be one of the most important determinants of the complexity of career conceptualizations is not a surprising discovery and is easily reconcilable with cognitive developmental theory. While the obvious emphasis of cognitive developmental theory is on the qualitative changes in thinking that take place over time, it certainly does not deny that individuals vary innately in their intellectual abilities. Students who are more intellectually capable would be expected to possess the ability to grasp more complex conceptualizations of careers than lower level students and this expectation was strongly confirmed by responses to the questionnaire items.

The effects of sex on responses to questionnaire items were greatest on the career conceptualization items. On all items on which there were significant differences with sex, females demonstrated more complex or appropriate perceptions of careers than did males. This finding appears to further cloud the issue of the effects of sex on the development of critical thinking. Kitchener and King (1981) and Welfel (1982a) report no significant sex differences on their measures of Reflective Judgement. Strange and King (1981), on the other hand, reported significantly higher Reflective Judgement Scores for males than females. Results of the present study are contradictory to both of these findings and should be interpreted with much caution. It is possible that the results of the present study are indicative of a real sex

difference which exists at the high school level but not at the college level, at which the research on Reflective Judgement has been conducted. The discrepancy could further be explained by differences in the constructs of Reflective Judgement and level of intellectual development as measured in the present study by student conceptualizations of careers. Finally, the discrepant results of the present study could be attributed to a local sex difference which is unique to Newfoundland or to the confounding effects due to sampling characteristics. Discovery of the exact cause of such differences must await further research.

Student's Ratings of the Course and Their Perceptions of Their Career Education 3101 Teachers

The strongest relationship between any variable and a particular cluster of items that was revealed by the present study was the high degree of significance between the demographic variable and students' perceptions of their teachers and their rating of Career Education 3101. On all but one item on this section of the questionnaire, rural students were significantly more positive of their teachers and/or the course. This finding can best be interpreted by cognitive theory in terms of students' perceptions of authorities. It appears that rural students share perceptions of authorities (parents, teachers, interest inventories, etc.) that are characteristic of simplistic thinking. Their positive rating

of their teachers and the course is characteristic of Knefelkamp's and Slepitza's dualistic thinker who "tends to turn to parents, teachers, counsellors, (and) interest inventories ... to define both self and the right career decisions" (p. 54). It appears that the respect of rural students for authorities and their refusal to challenge or question these authorities, which have traditionally been praised as admirable characteristics of youth, might be hindrances to their development of more appropriate and complex conceptualizations of careers and, indeed, to their overall intellectual development.

Support for this particular interpretation of rural students' perceptions of authorities was provided by student responses on the career conceptualization items. On these items rural students varied significantly from urban students by demonstrating more simplistic conceptualizations of authorities. For example, rural students agreed that "it is the job of counsellors and/or teachers to guide me into the right occupation." Also, they varied from urban students by agreeing with the statement, "I prefer that my counsellors, teachers or parents simply tell me what is important to know about careers."

This section of the questionnaire also revealed a very strong relationship between students' perceptions of the Career Education course and their teachers for the course and the extent of process employed by their teachers. Students

appeared to view their teachers and the course more favorably if teachers used a variety of activities as opposed to a high proportion of traditional lecturing. The importance of this implication is accentuated by the fact that a frequent comment of students was that the course was boring. It appears that frequent, varied activities might serve to overcome students' expressed apathy for the course.

Blocher and Siegal (1981), Sanford (1966, cited in Schmidt and Davison, 1983), Widick (1977, cited in Schmidt and Davison, 1983) and Young (1981) all warn against overestimating students' present perceptions of careers by challenging them with alternate conceptualizations that are so discrepant from present conceptualizations that students are overwhelmed and thus reject the alternate positions outright. A possible interpretation of the very positive rating of the course by students of high process teachers is that these students were indeed able to cope with the degree of challenge offered by the various activities. Being challenged with beliefs, opinions and information that were overwhelming would be unlikely to have resulted in such a positive rating of the Career Education 3101 course by the high process students.

Responses on this section of the Student Questionnaire provided additional support for the more complex conceptualizations of Level III students. On all items on this section on which significant differences existed with level, it was the Level III students who tended to be more critical of

their teachers and/or the course. According to cognitive theory, Level III students, unlike lower level students, no longer view authorities as possessors of absolute knowledge (Welfel, 1982b, p. 17). Relative to lower level students, they are able to acknowledge the fallability of authorities and to view them as biased or arbitrary (Schmidt and Davison, 1983, p. 563). In summary, students' perceptions of their teachers and their rating of Career Education 3101 appear to have been strongly influenced by three factors, the demographic variable, the extent of process variable and student's level in school.

Recommendations

Recommendations for Programming Arising from Comments of Teachers and Students

1. Efforts be made to obtain a new, more comprehensive, better organized and more challenging text for the course.
2. Career Education 3101 be made available to students in their second, as opposed to third, year of their high school program.
3. Career Education 3101 not be tested by a government set public examination.
4. Some forum be established to permit the dissemination

of information from the Department of Education to teachers of Career Education 3101. Such could take the form of a monthly newsletter which provides teachers with information about other teachers' experiences with the course, teaching hints, appropriate activities, bibliographies of related materials, brief reviews of major career theories, etc.

5. Student manuals, either the one presently available to teachers or some other well selected manual, be made available to all students.
6. Efforts be made to provide all high school students with adequate counselling regarding selection of high school courses.
7. As with many other high school courses, cost-shared grants be made available to schools offering Career Education 3101 to finance the purchase of resource materials.

Recommendations for Programming Arising from Evaluation of Cognitive Theory

1. Efforts be made to offer Career Education 3101 to as many high school students as possible, especially to basic students and students in rural centers.
2. Career Education 3101 be taught in such a manner that a high degree of process, characterized by

activities, discussions, use of guest speakers, role playing, etc. is employed.

3. Students of Career Education 3101 be challenged with conceptualizations of careers and authorites that are somewhat more complex than, and thus discrepant from, their present perceptions.
4. Career Education 3101 be personalized as much as possible as a means of support for students as they struggle with the difficult task of formulating more complex conceptualizations of careers.
5. All teachers of Career Education 3101 make students aware of the restrictions placed on the number of their career options by sex stereotyping and, depending on their interests, encourage them to pursue nontraditional sex roles.
6. Newfoundland educators be encouraged to view Career Education 3101 as but one step in the career education of our youth. While the present and potential benefits of this course are numerous, educators must be cautioned against assuming that the career education needs of Newfoundland youth have now been satisfied. Instead, any successes of Career Education 3101 must be interpreted as encouragement to continue and expand the process of career education, rather than as the successful completion of the process.

7. Efforts be made by teachers of Career Education 3101 to convey to their students the notion that interest inventories and other vocational questionnaires, while useful tools to help one make a career choice, cannot by themselves indicate a suitable career for a person. Further, students must be encouraged to view career planning as a multi-faceted process which involves many steps including the use of such tools.
8. Efforts be made by teachers of Career Education 3101 to provide students with information about as many occupations as possible.

Recommendations for Further Research

1. Career Education 3101 be taught with a particular emphasis on strategies and content aimed at fostering cognitive development and the effects of such an approach be studied.
2. Research be undertaken to ascertain the exact nature and extent of sex-related differences in career conceptualizations and to explore the cause/s of these differences.
3. Research be undertaken to study the nature, causes and consequences of rural students' perceptions of authorities. In particular, to determine the extent to which opinions and advice of adults influence the career choices of rural students.

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APPENDIX A

Table A

Factors Cited by Course and Noncourse Students as Those that Limit the Number of Their Career Options the Most

Factor	Course		Noncourse		Total	
	N	%	N	%	N	%
Abilities	95	22.9	84	24.1	179	23.5
Poor economy	79	19.1	78	22.3	157	20.6
Lack of money	43	10.4	38	10.9	81	10.6
Lack of information	61	14.7	81	23.2	142	18.6
Unwillingness to leave home	15	3.6	9	2.6	24	3.1
Having done the wrong courses	97	23.4	46	13.2	143	18.7
Other	24	5.8	13	3.7	37	4.8
Total	414		349		763	

Chi-square < .01

Table B

Students' Feelings about Prospect of Making Occupational Choice by Level in School

Feeling	Level III		Levels I & II		Total	
	N	%	N	%	N	%
Very confident	77	49.7	57	60.6	134	53.8
Minor concerns	64	41.3	27	28.7	91	36.5
Very worried	7	4.5	5	5.3	12	4.8
Totally confused	7	4.5	5	5.3	12	4.8
Total	155		94		249	

Tau c < .05

Table C

Students' Plans for After Graduation by Level in School

Plans	Level III		Levels I & II		Total	
	N	%	N	%	N	%
M.U.N.	172	30.6	53	24.4	225	28.8
College of Trades & Technology	89	15.8	24	11.1	113	14.5
College of Fisheries	33	5.9	9	4.1	42	5.4
Trades School	92	16.3	47	21.7	139	17.8
School of Nursing	6	1.0	1	.5	7	.9
Police Academy	2	.4	1	.5	3	.4
Armed Forces	13	2.3	5	2.3	18	2.3
Other Institution	58	10.3	21	9.7	79	10.1
Get a Job	19	3.4	9	4.1	28	3.6
Take Some Time Off	19	3.4	0	0.0	19	2.4
Other	7	1.2	4	1.8	11	1.4
Undecided	53	9.4	43	19.8	96	12.3
Total	563		217		780	

Chi-square < .01

Table D

Factors Cited by Students of Different Academic Streams as Those Limiting the Number of Their Career Options the Most

Factor	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Abilities	120	25.3	12	19.0	47	21.2	179	23.6
Poor economy	109	22.9	17	27.0	30	13.5	156	20.5
Lack of money	53	11.2	5	7.9	23	10.4	81	10.7
Lack of information	114	24.0	8	12.7	19	8.6	141	18.6
Unwillingness to leave home	16	3.4	3	4.8	4	1.8	23	3.0
Having done wrong courses	31	6.5	18	28.6	94	42.3	143	18.8
Other	32	6.7	0	0.0	5	2.3	37	4.9
Total	475		63		222		760	

Tau c < .01

Table E

Employment Status of Father by Students' Academic Stream

Employed	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Yes	388	81.3	45	72.6	153	69.5	586	77.2
No	89	18.7	17	27.4	67	30.5	173	22.8
Total	477		62		220		759	

Chi-square < .01

Table F

Father's Occupation by Student's Academic Stream

Occupation	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Supervisor/ Foreman	46	11.2	2	4.0	20	12.0	68	10.8
Owner/ Manager	29	7.0	2	4.0	7	4.2	38	6.1
Professional	41	10.0	3	6.0	6	3.6	50	8.0
Technical	8	1.9	4	8.0	2	1.2	14	2.2
Clerical/ Secretarial	11	2.7	1	2.0	1	.6	13	2.1
Sales	15	3.6	2	4.0	3	1.8	20	3.2
Service/ Recreation	10	2.4	1	2.0	3	1.8	14	2.2
Fishing/ Fishplant	54	13.1	4	8.0	34	20.5	92	14.6
Logging/ Mining	8	1.9	3	6.0	3	1.8	14	2.2
Transportation/ Communication	18	4.4	5	10.0	15	9.0	38	6.1
Crafts/ Trades	102	24.8	16	32.0	39	23.5	157	25.0
Unskilled/ Laborer	36	8.7	2	4.0	22	13.3	60	9.6
Religious/ Minister	3	.7	0	0.0	0	0.0	3	.5
Self-employed	8	1.9	1	2.0	2	1.2	11	1.8
Deceased/ Retired	23	5.6	4	8.0	9	5.4	36	5.7
Total	412		50		166		628	

Chi-square < .05

Table G

Mother's Occupation by Student's Academic Stream

Occupation	Acad. Math & Language		Acad. Math Only		Basic Math & Language		Total	
	N	%	N	%	N	%	N	%
Supervisor/ Foreman	7	2.2	0	0.0	3	2.4	10	2.1
Owner/ Manager	19	6.0	1	2.8	2	1.6	22	4.6
Professional	38	11.9	3	8.3	10	8.1	51	10.7
Technical	1	.3	1	2.8	1	.8	3	.6
Clerical/ Secretarial	89	28.0	10	27.8	24	19.4	123	25.7
Sales	11	3.5	2	5.6	0	0.0	13	2.7
Service/ Recreation	40	12.6	6	16.7	22	17.7	68	14.2
Fishing/ Fishplant	57	17.9	5	13.9	37	29.8	99	20.7
Transportation/ Communication	1	.3	1	2.8	2	1.6	4	.8
Crafts/ Trades	6	1.9	0	0.0	4	3.2	10	2.1
Unskilled/ Laborer	41	12.9	6	16.7	19	15.3	66	13.8
Religious/ Minister	2	.6	0	0.0	0	0.0	2	.4
Self-employed	5	1.6	0	0.0	0	0.0	5	1.0
Deceased/ Retired	1	.3	1	2.8	0	0.0	2	.4
Total	318		36		124		478	

Chi-square < .05

Table H

Employment Status of Father by Counsellor-Teacher Variable

Father Employed?	Students taught by				Total	
	Counsellor		Teacher			
	N	%	N	%	N	%
Yes	170	85.9	138	72.6	308	79.4
No	28	14.1	52	27.4	80	20.6
Total	198		190		388	

Chi-square < .01

Table I

Employment Status of Father by Demography

Father Employed?	Urban		Rural-Urban		Rural		Total	
	N	%	N	%	N	%	N	%
Yes	127	85.8	91	82.7	90	69.2	308	79.4
No	21	14.2	19	17.3	40	30.8	80	20.6
Total	148		110		130		388	

Chi-square < .01

Table J

Father's Occupation by Demography

Occupation	Urban		Rural-Urban		Rural		Total	
	N	%	N	%	N	%	N	%
Supervisor/ Foreman	16	12.9	6	6.1	12	11.5	34	10.4
Owner/ Manager	14	11.3	5	5.1	2	1.9	21	6.4
Professional	9	7.3	6	6.1	6	5.8	21	6.4
Technical	2	1.6	4	4.0	3	2.9	9	2.8
Clerical/ Secretarial	4	3.2	2	2.0	0	0.0	6	1.8
Sales	6	4.8	4	4.0	1	1.0	11	3.4
Service/ Recreation	6	4.8	3	3.0	1	1.0	10	3.1
Fishing/ Fishplant	3	2.4	9	9.1	26	25.0	38	11.6
Logging/ Mining	4	3.2	3	3.0	1	1.0	8	2.4
Transportation/ Communication	3	2.4	8	8.1	10	9.6	21	6.4
Crafts/ Trades	37	29.8	30	30.3	30	28.8	97	29.7
Unskilled/ Laborer	11	8.9	11	11.1	6	5.8	28	8.6
Religious/ Minister	0	0.0	2	2.0	0	0.0	2	.6
Self-employed	3	2.4	1	1.0	0	0.0	4	1.2
Deceased/ Retired	6	4.8	5	5.1	6	5.8	17	5.2
Total	124		99		104		327	

Chi-square < .01

Table K

Mother's Occupation by Demography

Occupation	Urban		Rural-Urban		Rural		Total	
	N	%	N	%	N	%	N	%
Supervisor/ Foreman	1	1.2	1	1.5	2	2.3	4	1.7
Owner/ Manager	4	4.9	2	3.0	4	4.6	10	4.2
Professional	10	12.2	9	13.4	6	6.9	25	10.6
Technical	2	2.4	1	1.5	0	0.0	3	1.3
Clerical/ Secretarial	28	34.1	16	23.9	13	14.9	57	24.2
Sales	6	7.3	2	3.0	2	2.3	10	4.2
Service/ Recreation	12	14.6	14	20.9	13	14.9	39	16.5
Fishing/ Fishplant	5	6.1	8	11.9	28	32.2	41	17.4
Transportation/ Communication	0	0.0	0	0.0	1	1.1	1	.4
Crafts/ Trades	3	3.7	1	1.5	1	1.1	5	2.0
Unskilled/ Laborer	11	13.4	10	14.9	15	17.2	36	15.3
Religious/ Minister	0	0.0	1	1.5	1	1.1	2	.8
Self-employed	0	0.0	2	3.0	0	0.0	2	.8
Deceased/ Retired	0	0.0	0	0.0	1	1.1	1	.4
Total	82		67		87		236	

Chi-square < .01

APPENDIX B

Table L

Number and Percentage of Students Who have Decided on an Occupation

Decided?	N	Percent
Yes	529	67.0
No	261	33.0
Total	790	

Table M

Students' Feeling about Their Occupational Choice

Feeling	N	Percent
Very confident	221	42.1
Minor concerns	250	47.6
Not confident	28	5.3
Very worried	14	2.7
Other	12	2.3
Total	525*	

*This total refers to the total number of valid responses by students who have decided on an occupation.

Table N

Students' Perceptions of the Number of Career Options Available to Them

Number of Options	Number of Students	Percent	Cumulative Percent
Less than 5	123	16.0	16.0
Between 5 and 10	240	31.3	47.3
Between 10 and 20	141	18.4	65.7
Between 20 and 100	141	18.4	84.1
Between 100 and 500	57	7.4	91.5
Over 500	66	8.6	100.0
Total	768		

Table 6

Number of Occupations Students have Seriously Considered Pursuing

Number of Occupations	Number of Students	Percent	Cumulative Percent
1	45	6.0	6.0
2	145	19.3	25.3
3	201	26.8	52.1
4	150	20.0	72.1
5	77	10.3	82.4
6	64	8.5	90.9
7	33	4.4	95.3
8	8	1.1	96.4
9	27	3.6	100.0
Total	750		

Table P

Consistency between Students' Abilities and the Occupations They have Seriously Considered

Consistency	Number of Students	Percent
Consistent	642	87.1
Inconsistent	95	12.9
Total	737	100.0

Table Q

Consistency of Interests Demonstrated by Occupations Seriously Considered

Consistency	Number of Students	Percent	Cumulative Percent
Very consistent	87	12.4	12.4
Consistent	228	32.5	44.9
Inconsistent	267	38.1	83.0
Very inconsistent	119	17.0	100.0
Total	701		

Table R

Factors Cited by Students as Those that Most Limit the Number of Their Career Options

Factor	Number of Students	Percent	Cumulative Percent
Abilities	179	23.5	23.5
Poor economy	157	20.6	44.1
Lack of money	81	10.6	54.7
Lack of information	142	18.6	73.3
Unwillingness to leave home	24	3.1	76.4
Having done wrong courses in high school	143	18.7	95.1
Other	37	4.8	100.0
Total	763		

Table S

Number and Percentage of Students Planning to Continue Their Education Beyond High School

Planning to Continue Education?	Number of Students	Percent
Yes	715	92.6
No	57	7.4
Total	772	

Table T

Students' Plans for After Graduation

Plans	Number of Students	Percent	Cumulative Percent
M.U.N.	227	29.0	29.0
College of Trades & Technology	113	14.4	43.4
College of Fisheries	42	5.4	48.8
Trades School	140	17.9	66.7
Other School or College	79	10.1	76.8
Get a Job	28	3.6	80.4
Take Some Time Off	19	2.4	82.8
Armed Forces	18	2.3	85.1
School of Nursing	7	1.0	86.1
Policy Academy	3	.4	86.5
Other	11	1.4	87.9
Undecided	96	12.3	100.0
Total	783		

Table U

Students' Estimates of the Extent of Their Present Career Knowledge

Extent of Knowledge	Number of Students	Percent	Cumulative Percent
Very limited	9	1.1	1.1
Limited	61	7.8	8.9
Fair	415	52.7	61.6
Extensive	274	34.8	96.4
Very extensive	28	3.6	100.0
Total	787		

Table V

Major Sources of Career Information as Cited by Students

Source of Information	Number of Students Citing Source	Percent	Cumulative Percent
Counsellor	210	29.5	29.5
Printed material at school	178	25.0	54.5
Teachers	112	15.7	70.2
Parents	35	4.9	75.1
Career Days	14	2.0	77.1
Work experience	12	1.7	78.8
People in field	17	2.4	81.2
Career Education 3101	55	7.7	88.9
Post-secondary institutions	18	2.5	91.4
Relatives	11	1.5	92.9
Libraries and media	16	2.2	95.1
Canada Manpower	14	2.0	97.1
Friends	6	.8	97.9
Other	14	2.0	100.0
Total	712		

Table W

Students' Rating of the Career Education 3101 Course and Their Perceptions of Their Teachers

---

55.4% - Agreed or strongly agreed that the course helped them decide on an occupation.

73.3% - Agreed or strongly agreed that the course was a good source of occupational information.

38.5% - Agreed or strongly agreed that the course helped reduce their anxiety about choosing an occupation.

68.4% - Agreed that the course helped them determine their interests, values and abilities.

82.6% - Agreed or strongly agreed that the course taught them what they had to know in order to get a job.

60.2% - Agreed or strongly agreed that the course caused them to question their beliefs and opinions about careers.

30.8% - Agreed or strongly agreed that the course was poorly organized.

36.3% - Agreed or strongly agreed that they did the course because nothing else was available.

24.7% - Agreed or strongly agreed that the only value of the course was that it gave them a 3000 level credit.

52.4% - Students indicated that their teacher understood how they felt about making a career choice.

82.8% - Agreed or strongly agreed that their teacher was a good source of occupational information.

16.0% - Agreed or strongly agreed that their teacher knew best which occupation was best for them.

66.0% - Agreed or strongly agreed that their teacher enjoyed teaching the course.

65.6% - Agreed that their teacher was a good teacher for the course.

65.5% - Agreed or strongly that their teacher was supportive and encouraging.

APPENDIX C

Table X

Student Responses to an Open-ended Question Requesting that They Make any Suggestion, Criticism or Other Comment

19.3%	Students who responded made some general comment that could be interpreted as an overall positive response to the course.
18.3%	Students who responded made some negative comment about the texts. Included were overall negative comments as well as specific comments relating to the organization, content and physical condition of the texts.
17.3%	Students who responded expressed disappointment that the course did not provide enough occupational information.
13.3%	Those who responded made some totally negative comment indicating that the course was of absolutely no value.
13.0%	Students who responded indicated that the course was boring.
10.0%	Those who commented felt that the course was offered too late to be of much value to them.
8.3%	Students who responded indicated that the course should not be tested by a public exam.
5.3%	Those who commented felt that there was not sufficient time to adequately complete the course.

APPENDIX D

STUDENT QUESTIONNAIRE

(For students of Career Education 3101)

The purpose of this questionnaire is to obtain information about students' career plans, and to determine their opinions and beliefs about the process of career choice. It is not a test. There are no right or wrong answers. Please read all instructions carefully, and answer the questions as frankly as possible. Do not sign your name to this questionnaire.

Sex.....Male_____ Female_____

Age....._____

Level....._____

School....._____

Location of School (Town/City)..._____

Indicate below which of the following math courses you have completed or are presently enrolled in.

Advanced Mathematics 1201_____	Academic Mathematics 1203_____
Advanced Mathematics 2201_____	Academic Mathematics 2203_____
Advanced Mathematics 3201_____	Academic Mathematics 3203_____

Consumer Mathematics 1202 _____

Vocational Mathematics 2202_____

Business Mathematics 3202 _____

Indicate below which of the following English language courses you have completed or are presently enrolled in.

Language 1101_____	Basic English 1102 _____
Language 2101_____	Vocational English 2102_____
Language 3101_____	Business English 3102 _____

PLEASE ANSWER EACH OF THE FOLLOWING QUESTIONS BY PLACING A CHECK (✓) IN THE BLANK CORRESPONDING TO THE ANSWER YOU WISH TO SELECT.

1. Have you decided on an occupation that you plan to pursue upon finishing high school?

Yes_____ No_____

2. If you answered "Yes" to Question Number 1, then indicate below how you feel about your occupational choice.

_____a) I am very confident that I have made the right choice.

_____b) I have some concerns of a minor nature, but I am happy with my decision.

_____c) I do not feel confident about my occupational choice; I hope I made the right decision.

_____d) I am very worried that my occupational choice was a mistake. I really do not know if it is what I want to do.

_____e) Other. Please specify._____

_____

3. If you answered "No" to Question Number 1, then indicate below how you feel about the prospect of making an occupational choice.

_____a) I am sure I can make an occupational choice that is right for me. I simply have not decided yet.

_____b) I am not positive, but I think that I will eventually make an occupational choice that is right for me.

_____c) I am very worried about making an occupational choice. I doubt if I can make an appropriate choice.

_____d) I am totally confused about making an occupational choice. I simply do not know how to decide.

_____e) Other. Please specify._____

_____

4. How many career options (occupations) do you feel are available to you?

_____a) Less than 5

_____b) Between 5 and 10

_____c) Between 10 and 20

_____d) Between 20 and 100

_____e) Between 100 and 500

_____f) Over 500

5. List below any career options (occupations) that you have seriously considered pursuing .

_____ _____ _____

_____ _____ _____

_____ _____ _____

6. What do you feel is the single most important factor that limits the number of career options available to you?

_____a) Your abilities.

_____b) Present poor state of the economy.

_____c) Lack of money to continue your education.

_____d) Lack of information about the various occupations that are available.

_____e) An unwillingness to leave your home town or province to obtain training or seek a job.

_____f) Having done the wrong courses in high school for entry to post-secondary institutions.

_____g) Other. Please specify._____

7. Of the six factors listed in Number 6, which one do you feel limits your number of career options the LEAST.

a)____ b)____ c)____ d)____ e)____ f)____

8. Do you plan to continue your education beyond high school?

Yes_____ No_____

9. Indicate which one of the following you plan to do when you complete high school.

_____a) Attend Memorial University.

_____b) Attend The College of Trades and Technology.

_____c) Attend The College of Fisheries, Navigation, Marine Engineering, and Electronics.

_____d) Attend a trades school.

_____e) Attend some other post-secondary school or college.

_____f) Attempt to get a job without any further education.

_____g) Take some time off. Do nothing for awhile.

_____h) Undecided.

_____i) Other. Please specify._____

_____

10. Using the scale below, how would you rate the extent of your knowledge about careers prior to the beginning of the present school year (i.e. prior to September)?

Very Limited	Limited	Fair	Extensive	Very Extensive
_____	_____	_____	_____	_____

11. How do you <u>now</u> rate the extent of your knowledge about careers?

Very Limited	Limited	Fair	Extensive	Very Extensive
_____	_____	_____	_____	_____

12. Prior to the beginning of the present school year, what was your major source of career information?

_____a) Counselor
_____b) Teachers
_____c) Parents
_____d) Career days
_____e) Printed material available at school
_____f) Work experience
_____g) Other. Please specify._____

13. What is <u>now</u> your major source of occupational information?_____

USING THE SCALE BELOW, INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS BY CIRCLING THE APPROPRIATE NUMBER TO THE RIGHT OF EACH STATEMENT.

Strongly Agree	Somewhat Agree	Undecided	Somewhat Disagree	Strongly Disagree
1	2	3	4	5

14. Generally, there is only one right career for a person.	1	2	3	4	5
15. It is the job of counselors and/or teachers to guide students into the right occupations.	1	2	3	4	5
16. Choosing a career is a complex task which involves a consideration of many factors including interests, abilities, values, personality factors, etc.	1	2	3	4	5

Strongly Agree	Somewhat Agree	Undecided	Somewhat Disagree	Strongly Disagree
1	2	3	4	5

17. There is no such thing as a single right career for a person. All careers have both advantages and disadvantages. Deciding on a career involves picking a career with the most advantages and fewest disadvantages. 1 2 3 4 5

18. I prefer that my counselor, teachers, or parents simply tell me what is important to know about careers. 1 2 3 4 5

19. People do not have much say in their careers. Careers are usually decided by economic conditions, luck, and other factors over which they have no control. 1 2 3 4 5

20. Vocational questionnaires which measure interests, values, aptitudes, etc. are able to tell me which career is right for me. 1 2 3 4 5

21. It is important for me to stick to whatever career choice I make. To change my mind later would mean I made a mistake. 1 2 3 4 5

22. The best way for my counselor and/or teachers to assist me in deciding on a career is to support and encourage me while I make up my own mind. 1 2 3 4 5

23. There are many occupations which are suitable for me. Occupational choice for me is (was) a matter of weighing all the alternatives to decide which one is the most appropriate for me right now. 1 2 3 4 5

24. I must be sure about my occupational choice since I am deciding for the rest of my life. 1 2 3 4 5

25. My parents and teachers probably know better than anybody which occupation I should choose. 1 2 3 4 5

26. Since a career is a lifelong process, it is not essential that I have specific plans at this early stage of my life. 1 2 3 4 5

Strongly Agree	Somewhat Agree	Undecided	Somewhat Disagree	Strongly Disagree
1	2	3	4	5

27. Deciding on an occupation takes too long. I wish I could simply make up my mind and have it over with. 1 2 3 4 5

28. There are more career options available to men than women. 1 2 3 4 5

29. The following items deal with how you perceive your Career Education 3101 teacher. He/she...

a) ...understands how I feel about making a career choice. 1 2 3 4 5

b) ...is a good source of occupational information. 1 2 3 4 5

c) ...knows which occupation is best for me. 1 2 3 4 5

d) ...appears to enjoy teaching this course. 1 2 3 4 5

e) ...is a very good teacher for this course. 1 2 3 4 5

f) ...is supportative and encouraging. 1 2 3 4 5

30. The following statements deal with how you feel about Career Education 3101.

a) This course was of great value in helping me decide on a career I plan to pursue. 1 2 3 4 5

b) This course was a very good source of occupational information. 1 2 3 4 5

c) This course has reduced my anxiety about choosing an occupation. 1 2 3 4 5

d) This course has helped me determine my interests, values and abilities. 1 2 3 4 5

e) This course has taught me what I have to know in order to obtain a job. 1 2 3 4 5

f) This course has caused me to question my beliefs and opinions about the meaning of a career. 1 2 3 4 5

Strongly Agree	Somewhat Agree	Undecided	Somewhat Disagree	Strongly Disagree
1	2	3	4	5

g) This course was poorly organized and confusing. It had very little order. 1 2 3 4 5

h) I did not choose to do this course. There was nothing else available during that period. 1 2 3 4 5

i) The only value of this course is that it gives me a 3000 level credit. 1 2 3 4 5

31. Below are listed a number of statements which indicate different ways in which your Career Education 3101 teacher could possibly assist you prepare for a career. Rank these statements in order of importance to you. Put a 1 before the statement that you feel indicates the most important way your teacher could help you. Put a 2 before the statement you feel indicates the second most important way your teacher could help you, and so on, until all 8 statements have been ranked. He/she could...

_____a) ...provide as much information as possible about different occupations.

_____b) ...guide me into the occupation he/she thinks is best for me.

_____c) ...encourage and support me as I try to make up my own mind about my career plans.

_____d) ...teach me the skills I'll need to get a job.

_____e) ...provide, and help me complete, questionnaires which measure my interests, values, and abilities.

_____f) ...help me to understand myself better.

_____g) ...increase my confidence to pursue further education and/or occupations outside my home community.

_____h) ...help me to see that there is more than one occupational option available to me.

32. Are there any other ways in which your teachers and/or counselor could help you as you try to make career plans? If "Yes". tell how._____

_____

_____

GO TO NEXT PAGE

Is your father presently employed? Yes_____ No_____

What is your father's occupation? _____

Is your mother presently employed? Yes_____ No_____

If "Yes", then list her occupation. _____

If "No", then list her previous occupation, if any. _____

Are there any other suggestions, observations, or criticisms of Career Education 3101 that you would like to point out. Please be totally frank. Your comments will be of value in proposing recommendations for improvements in this course. _____

TEACHER QUESTIONNAIRE

The purpose of this questionnaire is to obtain feedback from teachers about Career Education 3101. Please be as frank as possible. It is hoped that the recommendations arising from this questionnaire will eventually translate into improvements in the course.

School....._____

Population of School....._____

Location of School (Town/City)..._____

Approximate Population....._____
of City or Town

ANSWER THE FOLLOWING QUESTIONS BY PLACING A CHECK (✓) IN THE BLANKS CORRESPONDING TO THE ANSWER YOU WISH TO SELECT.

1. Have you received training as a counselor (i.e. studied educational psychology at the graduate level)&

Yes_____ No_____

2. Have you completed a graduate level course in career education?

Yes_____ No_____

3. Did you volunteer to teach Career Education 3101?

Yes_____ No_____

4. Do you think that Career Education 3101 shares equal status with the other non-core, one-credit courses offered at your school?

Yes_____ No_____

Comments?_____

5. Do you think that this course is supported by:

a) other teachers? Yes_____ No_____ Not Sure_____

b) administrators? Yes_____ No_____ Not Sure_____

c) parents? Yes_____ No_____ Not Sure_____

RESPOND TO EACH OF THE FOLLOWING ITEMS BY CIRCLING THE NUMBER TO THE RIGHT OF EACH ITEM THAT CORRESPONDS TO THE ANSWER YOU WISH TO SELECT.

6. At the beginning of the school year, how did you feel about the prospect of teaching Career Education 3101?	Very Reluctant	Very Enthusiastic
	1 2 3	4 5
7. How would you feel about the prospect of teaching Career Education 3101 again next year?	Very Reluctant	Very Enthusiastic
	1 2 3	4 5
8. How do you think your students view Career Education 3101?	Of No Value	Of Great Value
	1 2 3	4 5
9. How would you evaluate your knowledge of career development theory?	Non-existent	Comprehensive
	1 2 3	4 5
10. How would you evaluate your overall confidence in your ability to teach this course?	Very Non-confident	Very Confident
	1 2 3	4 5
11. Should this course only be taught by teachers who have received formal training in career education?	Strongly Agree	Strongly Disagree
	1 2 3	4 5
12. How would you evaluate your town/city as a source of resource materials or persons that could be utilized in Career Education 3101?	Very Poor	Very Good
	1 2 3	4 5
13. How would you rate the overall value of Career Education 3101 for your students?	Of No Value	Of Great Value
	1 2 3	4 5
14. How would you evaluate the texts provided for this course?	Very Poor	Very Good
	1 2 3	4 5

Comments?_____

_____

15. How would you evaluate the teachers manual provided for the course?	Very Poor	Very Good
	1 2 3	4 5

Comments?_____

_____

16. How would you rate the assistance provided by the Dept. of Education to help you teach this course?

Very Poor				Very Good
1	2	3	4	5

Comments?_____

_____

17. Should this course be a 2000 level course as opposed to a 3000 level course?

Strongly Agree				Strongly Disagree
1	2	3	4	5

18. Estimate, to the nearest 10%, the amount of Career Education 3101 time you generally devote to lecturing (as opposed to activities, discussion, field trips, etc.)

_____%

19. Indicate which, if any, of the following activities or techniques you have used with your Career Education 3101 students, and approximately how often you have used them. When indicating how often, use number of times (e.g. once, three times, etc.) rather than responses such as "rarely", "often", etc.

a) Visits to employers, post-secondary institutions, etc. Yes____ No____ If "Yes", How Often?_____

b) Small group activities Yes____ No____ If "Yes", How Often?_____

c) Structured class discussion (i.e. discussion planned in advance of class meeting) Yes____ No____ If "Yes", How Often?_____

d) Role-playing Yes____ No____ If "Yes", How Often?_____

e) Provided printed occupational material Yes____ No____ If "Yes", How Often?_____

f) CHOICES computer Yes____ No____ If "Yes", How Often?_____

g) Interest inventories, values surveys, etc. Yes____ No____ If "Yes", How Often?_____

h) Guest speakers Yes____ No____ If "Yes", How Often?_____

20. Are you aware of other teachers in your school using career-related projects or activities in their subjects that your Career Education 3101 students took advantage of?

Yes_____ No_____

If "Yes", please specify. _____

_____

21. Did the counselor, school board, or other teachers arrange and/or conduct any other career-related activities that were not done in conjunction with the course, but which your Career Education 3101 students took advantage of (e.g. tours, guest speakers, individual interviews, etc.)?

Yes_____ No_____

If "Yes", please specify._____

_____

_____

22. What do you feel is the greatest weakness of the course?

_____

_____

23. What do you feel is the most positive feature, or greatest advantage of Career Education 3101? _____

_____

_____

24. Under what conditions or with what improvements, could this course be of greater value to students? _____

_____

_____

25. Are there any other observations, suggestions, criticisms, etc., that you would like to comment on at this time? Use the back of this sheet if extra space is necessary. Non-counselors may wish to return to this item after completing the remainder of the questionnaire.

_____

_____

_____

_____

_____

_____

_____

_____

THE REMAINDER OF THIS QUESTIONNAIRE IS TO BE COMPLETED BY NON-COUNSELORS ONLY.

26. Please indicate any university courses which could possibly be considered qualifications for teaching Career Education 3101 (e.g. course(s) in educational psychology, vocational education, psychology of adolescence, etc.).

_____ _____

_____ _____

_____ _____

27. How much in-service for Career Education 3101 did you receive?

_____a) None

_____b) ½ day

_____c) 1 day

_____d) 1–2 days

_____e) more than 2 days. Please specify._____

28. By whom was the in-service conducted (e.g. school counselor, school board coordinator, etc.)?

_____

29. Overall, how would you rate the value of the in-service in terms of preparing you to teach Career Education 3101?

Of No Value				Of Great Value
1	2	3	4	5

30. Did you, in any way, make use of the services of a guidance counselor during your teaching of the course?

Yes_____ No_____

IF YOU ANSWERED "NO" TO THE PREVIOUS QUESTION, THEN PROCEED TO QUESTION NUMBER 34. IF YOU ANSWERED "YES", THEN CONTINUE WITH THE NEXT QUESTION.

31. In what way(s) did you make use of the services of a counselor?

a) As a guest speaker? Yes_____ No_____

b) As a source of career and/or occupational information? Yes_____ No_____

c) As a source of ideas about instructional techniques and classroom activities? Yes____ No____

d) As a source of interest inventories, values exercises, etc.? Yes____ No____

e) As a source of information about career development theory? Yes____ No____

f) Other. Please specify._____

_____

32. How would you describe the frequency of your contacts (re: Career Education 3101) with the counselor?

Once every several months or so	Approximately monthly	Approximately every 2 weeks	Approximately weekly or more
____	____	____	____

33. How would you rate the value of your use of the assistance of the counselor's services?

Of No Value				Of Great Value
1	2	3	4	5

34. Which of the following best describes the availability of the services of a guidance counselor to your school?

____a) Full-time counselor

____b) Part-time counselor

____c) Guidance coordinator at school board level

____d) No counselor services available

____e) Other. Please specify._____

_____

35. If you did not use the services of a counselor while teaching Career Education 3101, please indicate why you did not. Be specific.

_____

_____

_____

APPENDIX E

Table Y

Distribution of Sample by Major Variables Studied

Course-Noncourse				Sex				Level				Teacher- Counsellor*			
Course		Noncourse		Male		Female		I & II		III		Teacher		Counsellor	
N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
432	55	358	45	382	48	408	52	220	28	567	72	203	50	205	50

Stream						Extent of Process						Rural-Urban Classification					
Acad. Math & Lang.		Acad. Math & Basic Lang.		Basic Math & Lang.		High		Medium		Low		Urban		Rural-Urban		Rural	
N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
496	63	63	8	231	29	112	27	222	54	74	18	291	37	178	23	321	41

Age

15		16		17		18		19		20	
N	%	N	%	N	%	N	%	N	%	N	%
20	3	101	13	340	43	266	34	56	7	7	1

*Due to missing data, two classes of students could not be classified as being taught by teachers or counsellors.