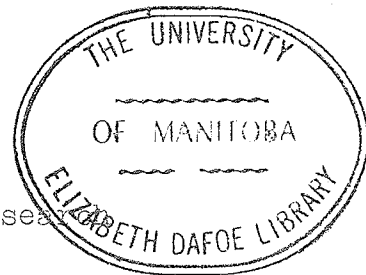


AN EXPERIMENTAL INVESTIGATION  
OF THE INFLUENCE OF AN OCCUPATIONS COURSE  
ON THE OCCUPATIONAL PREFERENCES OF GRADE 9 BOYS

An Abstract of a Major Thesis  
Presented to  
the Faculty of Graduate Studies and Research  
University of Manitoba



In Partial Fulfillment  
of the Requirements for the Degree of  
Master of Education

by  
HENRI JOHN ENNS  
January, 1968

## ABSTRACT OF THESIS

### I. PROBLEM

During the spring months of Grade 9, students in the Winnipeg School Division are asked to choose one of the several high school courses available for their studies in subsequent years. At the time of the investigation, Grade 9 was the initial grade level at which students were exposed to a major unit in vocational guidance. The occupations course conducted as part of the boys' group guidance program in Grade 9 is intended to assist the boys in making decisions regarding high school courses. The purpose of this thesis was to determine whether or not the occupations course had, in fact, a significant influence in initiating, developing or broadening the occupational considerations of students.

The hypotheses upon which this investigation was carried out are listed below:

1. That the occupational preferences of male students in Grade 9 will be significantly increased or changed as a result of taking an occupations course within the guidance program.
2. That a significant number of students will have indicated that the guidance class occupations course was an influencing factor in determining their occupational preferences.

## II. METHOD

The instruments used for measuring the influence of the occupations course were an Occupational Preference Check List and a General Questionnaire re Occupational Preferences. The Occupational Preference Check List consisted of sixty-seven occupational titles and also blank spaces where occupations not listed could be entered. The occupational titles were arbitrarily chosen from the Canadian Census Classifications, with an attempt to include a balanced number of professional, skilled, semi-skilled and "glamour" occupations. The Occupational Preference Check List and the General Questionnaire re Occupational Preferences were administered before and again immediately after the vocational guidance unit was taken in class. Changes in the number of first-choice preferences, changes in the number of alternatives, and changes in the nature of preferences were taken to be indicators of the students' broadening occupational horizons.

The sample group consisted of the entire male population of Grade 9 students at the General Wolfe Junior High School in Winnipeg during the 1964 - 1965 school term. One hundred boys participated in the occupations course. To overcome the limitation of a "one school sample", an attempt was made to show the similarity between the sample and the rest of the Grade 9 male population in the Winnipeg Schools.

Using such comparative indices as standardized mental ability scores, achievement records, numbers of withdrawals, and guidance practises in the occupations course as well as previous vocational guidance work, a high degree of similarity was established.

### III. CONCLUSIONS AND RECOMMENDATIONS

The general conclusions which were made as a result of the investigation were:

1. The occupational horizons of Grade 9 boys were significantly broadened, as reflected by the increases in the number and changes in the nature of occupational preferences.
2. By their own evaluation, students indicated that the occupations course had a significant influence in making or changing their occupational preferences.
3. No significant influences of the occupations course were found to result in other areas such as educational planning, realism of occupational choice, or differences in number and changes of preferences among various ability groups.

The recommendations which were made as a result of the findings were aimed at providing a greater amount of "lead time"---a broader, more intensive, and longer period of time--- for vocational guidance prior to the making of important



educational decisions by the students. These included:

1. A formal occupations course at a grade level earlier than Grade 9.
2. Vocational guidance interjected into the elementary grades as part of the existing curriculum.
3. Increased amount of counseling time made available in the junior high school grades in the Winnipeg School Division.
4. Greater flexibility in changing from one high school course to another.

Because of a dearth of research in Manitoba in guidance generally and vocational guidance particularly, it was also recommended that further research be initiated in such areas as surveys of vocational guidance practises, evaluations of vocational guidance techniques, and evaluations of influences of standardized interest and aptitude tests.

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## CHAPTER I

### INTRODUCTION

#### I. THE PROBLEM

At the time of this investigation (1965), the first formal vocational guidance of any depth was presented to the students in the Winnipeg School Division at the Grade 9 level. An occupations course or vocational guidance of any sort at this particular level has two general aims. The first is the long-term objective of developing or initiating vocational interests and preferences for the eventual choice by the student of a particular occupation or occupational field. The second is an immediate aim--that of providing a sound basis of vocational thinking on the part of the student in order for him to make a judicious decision regarding the choice of his high school course. In Manitoba this course choice decision must be made during the spring term of Grade 9. It is usually preceded by a survey of the high school courses available. This survey is in turn preceded by some form of an occupations course.

The influence of a formal occupations course, within the present structure of the guidance program, in initiating, developing, or broadening the occupational preferences of students, becomes an important question when the above aims

are considered. The purpose of this study is to determine:

- (a) How many students, who expressed no vocational preferences prior to the occupations course, indicated some preferences after the course;
- (b) How many students, already having expressed vocational preferences, have increased the number of alternatives, i.e., broadened their vocational outlook;
- (c) How many students, already having expressed several vocational preferences, have changed the order of their choices, particularly their first choice after the course, thus displaying some degree of vocational development.

Holland (1964) challenges counselors and vocational guidance programs to "help broaden the student's experiential base and thus possibly cause his interest patterns to change", and in the changing to become more realistic. By providing guidance with specific time allotments within the general school curriculum, and by specifying vocational guidance at various grade levels within the program of studies, the Department of Education of the Manitoba Government and the Winnipeg School Division are obviously assuming that the various guidance services--occupational information, counseling, etc.--will increase the student's knowledge of the world of work, broaden his experiential base, and thus assist him in making sound and realistic vocational and educational plans.

Is this assumption correct? Does the guidance program, as executed in the Winnipeg schools, have a positive influence in the vocational development and planning of the student? These questions are central to the purpose of this investigation.

## II. JUSTIFICATION FOR AND VALUE OF THE STUDY

Because the guidance movement in Manitoba has had a "grass-roots" origin, programs and services have been developed in individual schools and school systems, independent of one another, and thus with little or no uniformity. Attempts at cohesion in guidance have been very recent. The Winnipeg School Division was the first to appoint a Supervisor of Guidance, a position created in the fall of 1963. Although several school divisions have appointed Supervisors of Guidance since, at the time of this investigation, the Winnipeg office was the only one of its kind in Manitoba. In August of 1965 an Acting Supervisor of Guidance was appointed by the Department of Education to establish a Guidance Services Office within the framework of the Instruction Branch. In the following year (1966) this office was made the permanent Guidance Services Branch with a Supervisor and two assistants. It was not until 1964 that a specific Program of Studies for Guidance was issued by the Department, on the basis that it was to be a provisional outline only.

Because of the recency of these developments, the evaluation of representative programs has been impossible. There have been a minimal number of studies made in connection with any aspects of guidance in Manitoba. Two notable exceptions are the works of Donald and Guest. In 1951, Donald surveyed the development of guidance in the secondary school in all of Canada. Guest (1951) made a study of the needs, method and status of counseling in junior high schools in Winnipeg. Neither of these works, however, nor any other studies were directly concerned with the evaluation of one particular aspect of the program, such as the occupations course at the Grade 9 level. Since similar programs are now being presented in all the Winnipeg junior high schools, examinations of their influence are not only possible, but valuable.

Most authors in the field of vocational guidance agree that choosing a career is a long-term process rather than a single incident. "Choice is, in fact, a process rather than an event." (Super, 1957) Ginzberg and his associates added to this common "process" concept the theory of irreversibility. (Ginzberg et al, 1951) All decisions or choices which may affect a person's career pattern cannot be reversed or erased. This latter consideration adds a great deal of importance to the student's first act of decision--that of choosing a high school course at the end

of Grade 9, based on sound occupational thinking. Caplow (1954) adds another note of warning to both the difficulty and importance of any decisions made while the student is still at school, and also a note of challenge to the guidance programs when he states that:

Occupational choices are made at a time when the student is still remote from the world of work. They are made in terms of school requirements, which may call for quite different abilities and tastes from those which will be related to the eventual job.

The beliefs expressed by the above-mentioned authorities underline the importance of a student's first choice in his career pattern, and the importance of any program, such as the Grade 9 occupations course, which attempts to assist this first decision. This in turn lends importance and value to any study which attempts to evaluate the influence of such a program.

As mentioned earlier, the purpose of this study is to determine the influence and thereby the value of an occupations course at the Grade 9 level. In conjunction with this central purpose, it is hoped that the investigation will reveal:

1. Some of the general vocational attitudes of adolescents;
2. The readiness of Grade 9 students for choices regarding high school courses;
3. In the case of drop-outs or potential drop-outs,

their degree of readiness for the world of work;

4. Some considerations and recommendations regarding the occupations course, the general guidance program, or the entire school curriculum.

To a guidance counselor any knowledge of the student, as an individual or as a member of a group, particularly regarding his occupational aims, is an additional help in understanding and aiding the student. More pertinent to this study, any knowledge of the success or failure of a vocational guidance program is an important help in determining the extension and direction of such a program.

### III. SOURCE OF DATA, METHOD OF PROCEDURE, AND TREATMENT OF FINDINGS

Data for the study were collected from one hundred male students in Grade 9 attending General Wolfe Junior High School in Winnipeg. An Occupational Preference Check List was administered to the students prior to the beginning of the occupations course, and again immediately following the completion of the course. (Appendix A) A more detailed description of the sample and the occupations course itself will be presented in Chapter III. Additional data were gathered from the school records, individual cumulative folders, a Junior High School Pupil Information Form (Appendix B) which is administered to all students at the beginning of the school term, and a General Questionnaire re Occupational

Preferences (Appendix C), given at the start and completion of the occupations course.

Much of these additional data were used merely to obtain a better description of the sample in comparing it with the population of junior high school students in Winnipeg. Material from the student information form, which contained an open-end question requesting vocational preferences at that time, was added to the data gathered from the Occupational Preference Check List. From these sources statistics were compiled in the form of comparative tables, indicating the nature and number of "pre" occupations course and "post" occupations course preferences. Specifically, data were analysed to discover if the second, the "post" course questionnaire, revealed:

1. An increase in the number of students with first choices;
2. An increase in the number of alternatives;
3. An increase in the number of changes of first choices;
4. An increase in the number of changes or alternatives.

A number of other related questions arose during the analysis of data, and were subjected to tabular comparisons. All of these findings will be discussed fully in Chapters IV and V. A number of these comparisons were tested for significance by the use of the Chi Square Test.



## IV LIMITATIONS OF THE STUDY

The occupational preferences studied in this work are the expressed or stated interests--not the tested interests--of the students. Educational researchers involved in the field of testing vocational interests appear to be agreed upon several basic thoughts:

1. That there is a distinction to be made between tested and expressed interests;
2. That tested interests have a high degree of stability, whether or not they agree at that particular time with the expressed interests;
3. That expressed interests are constantly changing and manifest their changes most notably during the early adolescent years, the very years with which this study is concerned.

"Vocational interest patterns generally have a substantial degree of permanence at this stage: for most persons, adolescent exploration is an awakening to something that is already there." (Super, 1949) It can be assumed then, that on the basis of increased acquaintance with all aspects of occupations and the student's own personal characteristics, (aptitudes, interests, etc.), the correlation between expressed and tested interests will increase. With the above considerations in mind, the limitation of

studying only the expressed interests of the students, does substantially limit validity of such a study.

Other factors which may act as limitations upon this study are the small sample and the single-school occupations course which was investigated. Only one hundred boys of the same school were used as the sample, and the occupations course of this school only--one of nineteen junior high schools in the Winnipeg Division--was evaluated. Further discussions in Chapter III of this study will show that both the sample and the program are highly typical of guidance work in Winnipeg schools, and thus partially rule out this limitation of "smallness."

The usual experimental method of using a control group was not employed in this study, partly because of the size of the sample, as well as the writer's reluctance to withhold the information in the occupations course from some students. By testing for significance the major tabulations of statistics and by inquiring directly from the students about factors influencing their preferences, this limitation was partially overcome.

It must be kept in mind that this study was concerned only with the student's occupational preferences, not with any final decisions on his part.

## V. HYPOTHESIS AND EXPECTED RESULTS

The hypotheses upon which this investigation was carried out are listed below:

- I. That the occupational preferences of male students in Grade 9 will be significantly increased or changed as a result of taking an occupations course within the guidance program.
  - A. Of those students not expressing any vocational aims prior to the course, many will have indicated preferences after the course;
  - B. Many of the students' first choice preferences will have been changed;
  - C. Many students will have indicated a greater number of alternatives.
- II. That a significant number of students will have indicated that the guidance class occupations course was an influencing factor in determining their occupational preferences.

## VI. ORGANIZATION OF THE REMAINDER OF THE THESIS

The second chapter will concern itself with a review of some general considerations regarding the psychology of occupational choice. Other studies or experiments with similar or related topics, and their contributions to the

literature of vocational guidance will also be discussed.

Chapter III will be concerned with an overview of the guidance program in the Winnipeg schools, and the place of vocational guidance within the overall structure. The relationship of the occupations course which was conducted at General Wolfe Junior High School to the outlined program of studies and the courses conducted at other Winnipeg schools will also be reviewed. In addition, a description of the nature of the sample which is being used in this study will be made.

An analysis of the results of the investigation will be presented in Chapter IV. Basic findings will be shown mainly in the form of comparative tables.

A review of the findings presented in Chapter IV, and interpretations thereof, will constitute the fifth chapter of this study. This chapter will also concern itself with any conclusions reached and with any recommendations which may be applicable to the occupations course in particular, and the guidance program in general. Further ramifications relating to any other educational areas or aspects will also be reflected upon. A complete lack of documented experimental research in guidance and counseling exists to date in this province. Therefore, some remarks regarding future research applicable to certain aspects of guidance services will also be included in this chapter.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### I. INTRODUCTION

The intent of this chapter is not only to review similar and related studies and experiments, but also to discuss briefly the nature of the adolescent and his vocational development and maturity, and to present in summary some of the more commonly postulated theories of vocational development and choice.

The most general and over-riding characteristic of an adolescent is change. (Ginzberg, 1951; Sanderson, 1954; Super, 1942) Any experiment which attempts to measure some degree of change in an adolescent is, therefore, prey to the pitfall of assuming that change has been caused by the application of an artificial stimulus (in the case of this study, an occupations course), rather than by the result of natural consequences. For this reason it is deemed beneficial to survey the indices of general and vocational maturity which characterize the group which is represented in this study.

Although much disagreement still exists among authorities about the nature of vocational development and the process of decision-making in youngsters, some common principles have been developed through research, and have been

generally accepted. An understanding of these basic principles should serve as an aid in determining the expected results of the investigation, in interpreting more accurately the findings, and in formulating more realistic conclusions. A brief summary of the more noteworthy theories of vocational development will, therefore, be included in this chapter.

The major portion of this section will, however, be to summarize the significant findings of research projects which most closely relate to the current study.

## II. THE ADOLESCENT AND VOCATIONAL DEVELOPMENT

"Although there exists a great deal of knowledge about adolescence in general, relatively little is known about helping the individual adolescent and still less about assisting him in an occupational area." (Sanderson, 1954) Even a most superficial review of the literature on adolescence will quickly reveal the common ground on which those concerned about the nature of adolescents stand. That common ground is change. Ginzberg, et al., (1950) speak of this as the period of adjustment; Super (1949, 1961) frequently uses terms such as unstable, changing, impressionable; Havighurst (as cited in Cottingham and Hopke, 1961) speaks of this as a period for making new relations and adjustments; Josselyn (1952), referring to the attitudes of young adolescents, speaks of "extreme vacillations"; and Sanderson (1954) des-

cribes the period of young adolescence as one of unpredictability, self-contradiction and insecurity.

In addition to this general atmosphere of change and instability, many related factors which impede the vocational development of youngsters and create difficulties in their attempts at educational and occupational decision-making have been cited. Cottingham and Hopke (1961) list ten developmental tasks in which the adolescent is expected to advance:

1. Establishing new relations with age mates of both sexes;
2. Achieving a masculine social role;
3. Accepting one's physique--using the body effectively;
4. Achieving emotional independence from parents and adults;
5. Desiring and achieving socially responsible behaviour;
6. Developing intellectual skills;
7. Achieving assurance of economic independence;
8. Acquiring a set of values and ethics;
9. Selecting and preparing for a vocation;
10. Preparing for marriage and family life.

The above list implies a progression of time and age. The teenager of fourteen and fifteen years of age, with whom we are concerned in this study, is primarily involved in and concerned with the physical, social, and emotional changes mentioned in the first half of the above list. These are

his immediate tasks, and because of his deep emotional involvement with them, he sees the latter tasks, including that of preparing for a vocation, as remote and not very important.

Other general characteristics of the young adolescent further add to the difficulty of developing vocational maturity. Josselyn (1952) points out that this is the period when peer group attitudes dominate the youngster's thinking to a great extent--even in the realm of vocational aspirations. She also notes verbalizations and actions may contradict one another at this time, thus making educational and vocational decisions unstable, and any measurement or evaluation of these decisions equally difficult. Sanderson (1954), in his concern with vocational counseling of adolescents, refers to their extremely optimistic and autistic outlook on life as being yet another obstacle in sound vocational development:

One of the significant aspects of adolescent development, is the boundless optimistic outlook on life. The average adolescent believes somehow, somewhere his dreams will come true. He usually does not stop to examine the probability of his wishes becoming reality. He is too preoccupied with living in the present. The past is something he wishes to leave behind him as quickly as he can in his efforts to become a full-fledged adult. The future is an enigma, both alluring and frightening, but he is quite confident that he will be able to handle it when the time comes.

Super and Overstreet (Super, 1957), in their studies of vocational maturity of ninth grade boys, conclude that



teenagers at this level are not yet ready to make a decision regarding their future occupations.

In spite of the changing and unstable nature of adolescence, it is during these very years that the students are expected to make their first really important decisions. These are educational (i.e., choice of high schools, courses, and options). However, since these initial decisions will, in most cases, have an irreversible effect (Ginzberg et al, 1950) on future occupational choices, grade nine decisions must also be considered as pre-vocational choices. (Super, 1957)

The period of adolescence, then, presents a serious paradox. On the one hand, the nature of the adolescent makes it almost impossible for judicious decisions to be made, while on the other, this is the very time when school systems demand initial decisions from students.

There is no question but that in adolescence, a period that is already charged with difficulty and conflict, the increasingly urgent need to choose an occupation adds immensely to the tension. Greater attention to the problem should certainly result in more suitable planning and probably in more adequate choices. (Ginzberg, 1950)

Although the above quotation refers to the choosing of one specific career, the point made is equally true concerning any educational or pre-vocational decisions. The U. S. Office of Education, in its 1959 Bulletin Number 1 (as cited in Cottingham and Hopke, 1961) offers the following

opinion:

The period of most urgent need for guidance is when the crucial decisions are made regarding the educational program of the student. This is normally at the eighth or ninth grade, when the differentiation of choice of subject becomes possible.

Jones (1951) neatly sums up the problem in this manner:

Adolescence is the period of choice making, and guidance is the systematic efforts to improve the quality of choices.

The contradiction--the lack of readiness for decision-making on the one hand, and the necessity to make choices on the other--is not, however, without solution. Some of the very characteristics which seem to retard vocational development, also act as the means by which these students can be "guided" to make sound educational and later occupational choices. Their high degree of impressionability gives purpose to an exploratory occupations course at the junior and senior high school levels. Sanderson speaks of the young adolescent's "revolt against infantile conscience," and how this revolt "enables the adolescent to renounce his unrealistic fantasies and to plan for the future in terms of his abilities and the opportunities of employment." (Sanderson, 1954) Most authorities agree that although a great number of factors bear considerable influence in a student's occupational choice, the most basic element is interest. (Fleege, 1946; Kuder, 1956; Strong, as cited in Layton, 1960) This view has been most briefly and succinctly summed up by

Kaplan (1946) by defining vocational interests as the "harbingers of vocational choice." The authorities quoted above have all conducted research projects which seem to verify the belief that next to intelligence, measured interests are the most stable factors in a person's life. Thus the appraisal of interests as part of an occupations course should further assist the student in beginning to formulate realistic vocational aims.

Another common characteristic of young people is their natural curiosity, which lends itself to profitable exploitation in providing occupational information. Lena Five (1963) describes the age of grade nine students in this manner:

These are the years in which the student's interests in new ideas and ideals, in new information and concepts is strongest. Their curiosity is easily and readily aroused.

To sum up, many facets of adolescence cast doubt upon the values of conducting an occupations course. But it is also true that these same and other adolescent traits can be exploited by counseling and by an occupations course to broaden their vocational outlook, and bring about a greater degree of reality in their pre-vocational, (i.e., their educational) choices which have to be made at this stage of their development.

### III. THEORIES OF OCCUPATIONAL CHOICE

The science of vocational development is a recent one. Therefore, many contradictory views are to be found in the literature of this field. Even the view that no theory can be developed is presented by some researchers. The findings of Brill have caused him to come to such a negative conclusion: "A sensible person needs no advice and wants none in choosing a vocation; and fools will fail in spite of the best guidance." (Hoppeck, 1963) He has, therefore, formed a completely pessimistic attitude towards an occupations course or any kind of vocational development. Other researchers are more positive. Although each authority may interpret research findings with a seemingly singular slant, there is an increasing area of overlap and common ground. It is these commonly accepted or proven principles of vocational development that will be briefly reviewed on the following pages, for the methods, time, and influential factors of decision-making in regards to occupations are directly related to this study.

Beillin feels that at the core of vocational development is experience: "Experience permeates the entire determinant structure of occupational choice." (Hoppeck, 1963) Hoyt, however, denies this in his analysis of scores made on the Strong Vocational Interest Blank: "Strong has

shown that occupational scores are little affected by occupational experience or by training." (Hoyt, 1960)

Another theory of vocational development is the postulation that vocational choice is merely the result of satisfying felt needs. Anne Roe is the principle proponent of this theory: "Needs, and the satisfaction of which is delayed but eventually accomplished, will become unconscious motivators (of occupational choice), depending largely upon the degree of satisfaction felt." (Roe, 1956) She divided occupations into eight major groups, and each group into two levels of work. After studying the characteristics of people employed in each group and level, she concluded that personality and interests dictated which group a person enters, and intelligence and socio-economic influences dictated what level. These dictates were formed in the very early stages of life patterns. Roe's stress on the early family and home influence in creating felt needs, causes Jones to comment: "Her theory puts primary emphasis on childhood determinants of occupational choice." (Jones, 1951) Forer supports Roe's contentions: "Choice of vocation is not primarily rational or logical." (Hoppock, 1963) Continuing to echo Roe's findings, Forer states that occupational choice is based on the personality and emotional needs of the individual, operating consciously or unconsciously. Schaffer also concurs with such a philosophy: "Job satisfaction is directly

related to need satisfaction." (Hoppock, 1963)

Closely related to Roe's personality theory is the concept that an individual's self-image is the major determinant of occupational choice. Davenal (1965), when expounding the values of vocational guidance, claims that "a child's self-image is the greatest determinant of his occupational choice. This is where professional help can aid in evaluating intelligence, interest, aptitude, achievement, initiative and drive." Super does not agree that the "self-image" is the major determinant but rather one of many influential factors. However, he does affirm the belief that ". . . the self-concept is of paramount importance in determining vocational choice and satisfaction." (Jones, 1951)

Many other researchers have been forced to conclude from their data that occupational choice is mainly a matter of chance or accident. Miller and Form (Hoppock, 1963), after citing several influential factors, conclude that chance is the greatest determinant: "Individuals find their occupational goals through a compounding of work experience, observation and expectation. . . Accident is the deciding factor in determining the occupation of the majority of workers." Stekel supports this view, as cited by Ginzberg and associates: "If one were to investigate the motive behind entering an occupation by various persons, to one's surprise the discovery would be made that most of them come

upon it by chance." (Ginzberg et al, 1950) The acceptance of accident as an important determinant in the occupational choice of many young people, does not, however, preclude the importance of other possible influential factors. The Ginzberg group rejects the accident theory on yet another ground. Individuals, they argue, are subjected to a large number of accidental impulses, but respond to only a few. Thus the question "What motivates that particular response?" becomes a more significant point than the so-called accidental decision. The accident theory must also be rejected as the major determinant because its acceptance would imply that the individual can do nothing about the process.

Other authorities see the major occupational choice determinant as that of a model, particularly concerning the matter of job level. In Elmtown's Youth, Hollingshead suggests that the vocational choices of youth correspond to job patterns of the adult world. Each youth, consciously or unconsciously, limits his choice so that he will occupy the same level as his parents. (Hoppock, 1963) Carp extends this view to include another generation when she claims that "The model occupational level for both "desired" and "expected" occupations, is that of both the father and the grandfather." (Hoppock, 1963) Holland does not limit this "model theory" to level alone. His hypothesis is that every person is impelled to imitate one of a number of groups of

people. Holland's classification of occupations is based on types of people rather than kinds of jobs. His types are realistic, intellectual, social, artistic, conventional, and enterprising. He states, "The process of vocational choice is the finding of types of people who are like one's self." (Hoppock, 1963)

The foregoing authorities concerned themselves chiefly with the discovery of the major factor or factors influencing occupational choice. Pritchard, in citing Blau, Gustad, et al, places the various claims of major determinants of occupational choice as reviewed on the foregoing pages in the proper perspective: "The relative significance of various choice determinants changes with successive stages in the individual's life history." (Pritchard, 1962) Investigations of greater depth and of a broader scope, and therefore, of more value to the literature of the field, have concerned themselves with the process of choice. "Choice is in fact, a process rather than an event." (Super, 1957) This point of view has caused researchers to divide the vocational development of an individual into various life stages. Buehler, (as cited in Super, 1957) established a series of life stages that many authors were to follow and use in various modified forms. She classified a person's vocational life according to the following pattern:



1. Growth stage--ages 1 to 14;
2. Exploratory stage--ages 14 to 25;
3. Establishment stage--ages 25 to 45;
4. Maintenance stage--ages 45 to 65;
5. Decline stage--age 65 on.

Super, (as cited in Jones, 1951), modified Buehler's titles of each stage to read:

1. Exploration;
2. Transition--from school to work;
3. Floundering or trial--initial work situations;
4. Stability or establishment;
5. Decline.

Miller and Form, (as cited in Super, 1957), based their concepts of career patterns on five sociological classifications of life stages:

1. Preparatory work period--1 to 14 years;
2. Initial work period--the first part-time job;
3. Trial work period--job entry--16 to 25 years;
4. Stable work period--35 to 60 years;
5. Retirement period--60 years on.

The writings of Dysinger and Ginzberg, et al, follow a similar pattern of vocational stages, but narrow the concentration to the years up to and including occupational choice and job entry. The Ginzberg group divided this formative period into three sections:

1. Fantasy--before the age of eleven, dominated by interests;
2. Tentative--ages 11 to 17, the beginnings of considerations of capacities and values;
3. Realistic--after 17, realistic explorations, crystallization and specification.

Dysinger's theory (1951) almost duplicates the classifications of Ginzberg. He lists four periods up to and including job placement:

1. Fantasy--childhood;
2. Exploratory--early adolescent period, showing some reality in occupational preferences;
3. General preparation--same as above;
4. Specific preparation and placement--late adolescence.

In reviewing the above systems of classifications, it will be noted that the students who comprise the subject of this study fall into the tentative or exploratory stages. They have passed out of the fantasy stage, but are not yet in the realistic or specific preparatory stage. In their studies of the vocational maturity of ninth grade boys, Super and Overstreet (Super, 1961) describe this age as being characterized by a "readiness to consider problems of prevocational and vocational choice, but also by a lack of readiness to make vocational choices. Ninth graders are clearly in an exploratory stage, not in a decision-making

stage of vocational development." Tiedeman and Chara (Hoppock, 1963) not only claim that career development is a "continuous unbroken flow of personal experience," but add that "the pattern is never wholly permanent; it is continuously in a state of flux." Ginzberg and associates (as cited in Sanderson, 1954) summarize the concept of process in this way:

Our basic assumption was that an individual never reaches the ultimate decision at a single moment in time, but through a series of decisions over a period of many years; the cumulative impact is the determining factor.

The concept of compromise as an integral part of the process of vocational development is common to most authorities. "The crystalization of occupational choice inevitably has the quality of compromise." (Ginzberg, et al, as cited in Hoppock, 1963) Specifically, it is the compromise between aspiration and expectation. The 1956 Summer Seminar on Occupational Choice, conducted by the Social Science Research Council, concluded that occupational choice was a "compromise between preference for and expectation of being able to enter various occupations." (Super, 1957) Ginzberg and associates speak of the compromise as being one between subjective and objective reasoning. (Ginzberg et al, 1950) They further specify the elements of compromise as being interests, capacities, values, and opportunities.

Another commonly accepted principle of vocational development is the concept of irreversability. This theory was originally attached to the process of vocational development by Ginzberg and associates (1951). The United States Educational Policies Commission, in a 1956 bulletin on Manpower and Education, stresses the interrelatedness of a series of decisions that constitute occupational choice. "Wrong choices at any step may seriously interfere with making desired decisions later." The summation of vocational development in this publication reads as follows:

Choice of work is almost never made at once. Nor is it made in a short space of time. It is a developmental process that spans many years, during which the course taken is determined by a series of decisions, each one dependent in some measure at least on preceding ones.

One of the methods in achieving compromise may be termed as a process of elimination. As individuals become more realistic in their vocational development, they eliminate previous aspirations and narrow the field of possible occupations. Super (1942) and others agree that there are multitudinous potentialities for each individual, and that each stage narrows the possibilities. "Making a vocational decision is a lengthy process and much of it involves negative counseling; that is eliminating certain alternatives that seem to be inappropriate." (Endler, 1961) "As one proceeds in his line of work, his previous decisions tend to limit his choices open to him." (Hughes, 1963)

One of the seldom mentioned, but, in the writer's opinion, most important aspects in the process of decision-making is the problem of generalities versus specifics. Does a child, and later an adolescent, think in terms of broad occupational areas such as trades, professions, services, etc., or does he think of being an electrician, a doctor, or a policeman? Hamrin and Paulesen (1950) comment: "Nearly everyone thinks of specific jobs instead of broad vocational fields." One of the shortcomings of such thinking by the students is that "adolescents often think only of the top jobs in every field." (Hamrin and Paulesen, 1950) The writer, from experience and observation, is in complete agreement with the above citations. Their implications are important to this study, for they imply that a need for vocational guidance exists, and that any measurement of vocational preferences must be made in terms of specific job preferences.

In reviewing the previous pages of general theories of vocational development, certain common principles can be extracted:

1. Decision-making is not a single event, but a long continuous process;
2. Compromise is an important element in occupational choice;
3. The process of decision-making is to a great extent

irreversible;

4. Therefore, educational decisions made in the junior high school must be considered as important pre-vocational choices;

4. Early adolescents still think mainly in terms of specific jobs rather than broad occupational fields.

These principles heighten the importance of vocational guidance in schools at this level, and in turn increase the value of a study of evaluation of the effects of an occupations course as part of such vocational guidance.

#### IV. RELATED STUDIES

Research in Canada in the field of guidance is extremely minimal, and concerning the effects of an occupations course, non-existent. The most comprehensive compilation of research projects made in this country has been carried out by the Ontario Journal of Educational Research. Brehaut, (1959), in his review of research published in the aforementioned journal, lists 574 degree theses, of which only seventeen were concerned with some topic relating to guidance services in the schools. Jackson (1958), reviewing research in the same journal, found only 23 guidance-centered theses in all of Canadian educational research up to 1958. Six of these were in the French language. The few works that were recorded concerned themselves mainly with surveys

of guidance practises, history or development of guidance services, or comparisons with other countries. Very few experimental works were listed.

The most recent compilation of educational research was published in 1964 in the Ontario Journal of Educational Research. Table I reveals that the findings were similar to those of earlier years.

TABLE I  
EDUCATIONAL RESEARCH THESES  
IN CANADA 1960 - 1963

| TOTAL | GUIDANCE<br>TOPICS | RELATING TO<br>VOCATIONAL GUIDANCE | EVALUATING<br>OCCUPATIONS COURSE |
|-------|--------------------|------------------------------------|----------------------------------|
| 434   | 54                 | 5                                  | 0                                |

It is unfortunate, but true, that a review of any similar studies will have to be restricted to research work which has been carried on in the United States. In that country educational research theses are disproportionately more abundant. Brehaut (1959), in comparing U. S.--Canadian totals, sadly discovers that there is a ridiculous imbalance in the ratio, even when population differences are accounted for. The quarter century of research in his review shows that Canada produced 574 theses as compared to approximately one hundred thousand in the United States. However, this

abundance of research in the U. S. does not spill over into the field of experimentation to the degree that it perhaps should. Shannon (as cited in Brehaut, 1959) comments: "All types of educational experiments put together (not merely those concerned with guidance and counseling) are much less numerous than surveys."

In the realm of research involving occupations courses, occupational information, etc., the name of Robert Hoppock is singularly outstanding. He has conducted experiments with Cuony (1957) in evaluating the effects of an occupations course; he has surveyed high school and college practises with Stevens (1954); he has continuously reviewed research in the field of vocational guidance with Sinick and others. He has also reviewed the literature and experimentation of the vocational guidance field from its early beginnings. (Hoppock, 1949) Much of the material on the following pages was gleaned from the writings of Hoppock and his several aides.

The purpose of this study, as stated at the outset of Chapter I, is to evaluate the effects of an occupations course as part of the regular boys' guidance classes in Grade 9. The evaluation is to be based upon the number of changes of occupational preferences made before and after the course. In all of the research reviewed, no identical measurement, purpose, or condition was found. Hoppock and Sinick's find-



ings (1953, 1955, 1956, etc.) reveal that most research in the field of vocational guidance was concerned with a survey of guidance practises and services, student opinions, educational experts' opinions, and the evaluation of various guidance techniques and services. The great majority of research projects were made at the upper grade level of the senior high school. Tables II and III are compilations of the most recent reviews made by Hoppock and Sinick and reported in the Personnel and Guidance Journal, covering research in the years 1956 to 1962.

TABLE II

NATURE OF VOCATIONAL GUIDANCE RESEARCH STUDIES  
1956 - 1962

| TOTAL | EXPERIMENTAL | SURVEY OF PRACTISES | STUDENT OPINIONS | EDUCATORS' OPINIONS |
|-------|--------------|---------------------|------------------|---------------------|
| 67    | 13           | 38                  | 7                | 9                   |

TABLE III

EDUCATIONAL AREAS AS OBJECTS OF VOCATIONAL GUIDANCE  
RESEARCH STUDIES, 1956 - 1962

| TOTAL | ELEMENTARY | JUNIOR HIGH | SENIOR HIGH | COLLEGE |
|-------|------------|-------------|-------------|---------|
| 67    | 11         | 10          | 38          | 8       |

It will be noted from Table II that less than twenty percent of all research conducted during those years was experimental in nature, causing Salyer (1964) to complain: "There has been a dearth of experimental evidence concerning the effectiveness of vocational guidance."

In the few research programs that were classified as experimental, and that evaluated the effectiveness of an occupations course, a variety of criteria for measuring effectiveness were used. Hoppock and Cuony (1957) used job stability, job satisfaction and level of earnings as their criteria in several senior high school and follow-up studies. In each case their data confirmed that students having taken the course, rated high in all three categories than those who had not received the course. The title of the article which revealed their findings, summed up their conclusions: "Job Course Pays Off Again."

A more frequent method of evaluating an occupations course is to administer an occupational information test before and after the course. Warren (as cited in Hoppock, 1949) tested two classes in such a manner. One class scored a mean of 28.5 before the course and 82.4 after the course--an increase of 189 per cent. The other class had even more significant results: the mean score before the course was 27.3 and after the course, 86.6--an increase of 217 per cent. Dobberstein (as cited in Hoppock and Sinick, 1956) used a

similar method of evaluation in examining a control group and two experimental groups, using different techniques for presenting occupational information. Each of the experimental groups scored high on an occupational information test following the experiment.

Another criterion for judging the value of an occupations course was used by Loewenstein. (cited in Hoppock and Sinick, 1956) He measured the college grades of students in their freshmen year. The experimental group which had received an occupations course in the high school achieved significantly higher grades than the control group which had not received the occupations course.

Leonard (as cited in Hoppock and Sinick, 1964) used as his standard for judging the value of an occupations course the number of failures in a special class of Grade 10 and 11 repeaters. His contention was that these students had made unrealistic occupational goals and, therefore, found most school subjects meaningless, and as a result had failed their grade. In the year of his experiment, eighteen of the twenty-six students changed their vocational choices to what Leonard considered more realistic ones, and only four students failed the grade.

Haugen and Douglass (1937) attempted to evaluate the effects of an occupations course in terms of more appropriate educational planning on the part of the students. The auth-

ors concluded that the occupations course had been beneficial because it enabled the students to make decisions regarding high school courses more easily. Haugen and Douglass contended that these decisions were facilitated because more students had made vocational preferences after the course; approximately fifty per cent of the students had changed their vocational preferences more appropriately, (i.e. in keeping with their mental abilities), and "better" reasons for choosing vocations were given.

Attitudes toward chosen occupations was the topic of a research project by Bateman and Remners. (1939) High school freshmen's attitudes were surveyed before and after studying occupations by means of self prepared career books. "Evidently learning about a chosen vocation tends to remove the halo from the vocation and tends to lead towards more realistic attitudes."

Realism of occupation choice is yet another criterion used to evaluate an occupations course. In this area, considerable disagreement among the authorities exists. There are, it seems, two distinct camps of thought. One group, armed with impressive data from numerous studies, claims that students in both junior and senior high school---but particularly the early adolescents (Grades 8, 9, and 10)--are completely unrealistic in their occupation choices. Other researchers, equally well armed with statistical data of

their studies and interpretation of questionnaire answers, claim that adolescents are indeed realistic in their occupational aspirations.

Supporting the latter viewpoint, surveys made by Carp (1949) in relating boys' occupational aims with the vocations of their fathers and grandfathers, by Trow (1941) in measuring the occupational aims of students in a Detroit industrial area, and by Byrns (1939) in relating occupational choice to mental ability and occupational opportunity, all indicate that a high degree of realism exists in the vocational choices of their subjects. On the other hand, Stubbins (1948), Bingham (1937), and Fleege (1946) were able to prove a great lack of realism in the occupational aims of students, when compared to the census figures of the locale in which the study was conducted. Although there are several definitions of occupational realism, the most common in the research reviewed, was based on relating the individual's choice with the census figures, (i.e., occupational opportunities.) Many researchers are able to prove the students' lack of realism, so long as realism is defined in terms of comparing the aspirations of students as a group with the occupational structure of society.

More recent writers have questioned this basis of defining realism. Stephanson (1957) correctly points out that a truer meaning of occupational realism can be evolved when viewing each person individually. In a democratic soc-

iety with an ever-expanding catalogue of technological and social working opportunities available, and in which freedom of occupational choice is as important as many of the more renowned and cherished freedoms, it is wrong to suggest that it is more realistic and, therefore, desirable for every individual in society to enter the working force at a similar level of occupation at which his father or grandfather performed. That this most important issue, in discussing occupational realism, has not been taken into consideration by many of the researchers in the field is most incredible!

Stephanson adequately bridges the gap between the champions of realism and unrealism of adolescents' vocational choice by creating a distinction between aspirations and expectations. His study of a thousand New Jersey Grade 9 students revealed considerable differences in aspiration and expectation. As an example of his findings, seventy-three per cent of the students aspired to enter the business and professional field, but only forty per cent expected, or were planning to enter this area.

However, a project by Carp (1949), investigating the desired and expected occupations of 165 high school students in southern California, showed a high correlation between the desired and expected. He also discovered that the students' levels of aspiration were only slightly higher than the occupational fields of their forefathers.

Other authorities define occupational realism in terms of relating the mental abilities of the students with the mental ability means of those employed in the preferred occupations. Livesay (1941) found little relation between occupational preferences and I. Q., and concluded that students' occupational preferences were unrealistic. Super, (1960), in his studies of ninth grade boys in Middleton, N. Y., agreed that students did not realistically match abilities to vocational preferences.

However, the findings of Dresden (1948) were more positive. He concluded that there was a relatively high degree of correlation between vocational goals and abilities, at least when compared to the correlations of vocational goals to stated interests.

Lincoln, (as cited in Hoppock, 1963), in his extensive study with Grade 9 students, established correlations between students' mental abilities and the mental abilities of their occupational preferences. In an effort to determine which method of presenting occupational information is most influential, he investigated the correlates of three experimental groups and one control group. The following results were obtained:

|                                     |     |
|-------------------------------------|-----|
| Guidance five times a week. . . . . | .53 |
| Counseling only . . . . .           | .30 |
| No guidance or counseling . . . . . | .08 |
| Guidance once a week. . . . .       | .05 |

Except for the group receiving guidance five times a week, the correlations in Lincoln's study were insignificant. Certainly in the case of vocational guidance given once a week, the students' vocational preferences were unrealistic when related to their mental abilities.

Hoppock (1949), in his review of the literature prior to 1947, concluded that studies made in these years showed that occupations courses harmonized students' choices with the occupational structure of the community, but did not harmonize their choices with their measured mental abilities.

Studies which most closely simulate the project of this investigation were those which evaluated an occupations course wholly or partly on the basis of number and change of occupational preferences. In the Lincoln study discussed earlier, he used the number of preferences as an "indication of the breadth of occupational horizons." Payne (Hoppock and Sinick, 1964) used the number of changes in occupational preferences of Grade 8 students as a yardstick for measuring the value of an occupations course. Payne's study revealed that, of the students who had made choices both before and after the course, a significant 75.4 per cent had changed their preferences, and that 85.6 per cent of the after-course choices were in keeping with their measured interests.

Lincoln compared the number of occupational preferences made by students in his four groups. Asking for first, sec-



ond, and third choices, he established a ratio of the number of occupational preferences with the number of students.

The results follow:

|                                     |       |
|-------------------------------------|-------|
| Guidance once a week. . . . .       | 1.030 |
| Guidance five times a week. . . . . | .935  |
| Counseling only . . . . .           | .585  |
| No guidance or counseling . . . . . | .571  |

According to Lincoln, then, the students receiving group guidance once a week were most greatly influenced in broadening, what he termed, their "occupational horizons." Other aspects of Lincoln's findings are not as positive as the above measurement of breadth of occupational interests.

Many other research projects, with both positive and negative results, could also have been listed in this review, but they were mainly concerned in areas other than widening vocational interests. It must be remembered that the degree of broadening occupational preferences is the criterion of this investigation. In agreement with the findings of Super (1957), Ginzberg, et al (1951), and others, the early adolescent, who is the subject of this study, is still in the exploratory, rather than in the final or definite decision-making stage. An increase in the number of occupational preferences is, therefore, a desirable trait of vocational development at this age level. In agreement with Lincoln, (as cited in Hoppock, 1963), Carp (1949), Leonard (as cited in Hoppock and Sinick, 1964), and Payne (as cited in Hoppock

and Sinick, 1964), an increase in the number of students making choices and an increase in the number of students changing their choices serve as indicators of broadening vocational interests, if not increasing the realism of the choices. The above stated premises provide the basis for any value this project may have.

Most of the non-experimental work done in this field is centered on questions of grade placement of an occupations course, opinions of the value of the course by students, parents, teachers and educational administrators, and the comparison of the various techniques used in teaching occupations.

In the matter of grade placement, Lincoln (as cited in Hoppock, 1963), polling 1,426 replies to questionnaires answered by Grades 10 to 12 students in Rochester, N.Y., found Grade 9 was considered by the students to be the most valuable grade in which to give an occupations course. The students' preferences regarding grade placement of an occupations course were as follows:

|                   |                      |
|-------------------|----------------------|
| Grade 9 . . . . . | 853 or 59.7 per cent |
| Grade 10. . . . . | 623 or 43.6 per cent |
| Grade 11. . . . . | 560 or 39.0 per cent |
| Grade 12. . . . . | 671 or 47.0 per cent |

Rubinfeld (as cited in Hoppock and Sinick, 1964) also polled high school students who had been given an occupations course in Grade 9. Ninety-four per cent of the 808

students polled agreed that the course should be retained and had value. They were not in any significant agreement, however, on whether the course should be placed in a higher grade. In actual practice, two separate surveys prior to 1950 showed that Grade 9 was the most popular placement of such occupations courses, as confirmed by the investigations of Hoy, and of Polmantier and Clark. (both cited in Hoppock and Sinick, 1953)

The question of a compulsory or elective course has also been studied. The above mentioned works of Hoy, and of Polmantier and Clark, both found that compulsory and elective courses appeared equally frequent in practice. In a very limited survey of expert opinion, Kirtz (as cited in Hoppock and Sinick, 1962) polled six leading California administrators. All six agreed that the course should be compulsory.

Still another aspect of an occupations course is the matter of whether it should be given separately with credits for grade standings, or whether it should be presented as units within another subject. Wrenn and Duggan (Hoppock and Sinick, 1953), surveying 321 Minnesota schools, found 67 per cent of occupations courses taught as units, and 33 per cent as separate courses. The two-to-one ratio was confirmed in a similar study of 496 Indiana schools made by Peters. (Hoppock and Sinick, 1953) The results showed 118 separate

courses, and 343 units. Kosinki (Hoppock and Sinick, 1953) discovered the same ratio again in examining twenty Chicago high schools. However, Hoy (Hoppock and Sinick, 1953) found that students preferred the separate course. Seventy-six per cent showed "satisfaction" with the separate course, while only forty per cent were satisfied with the unit course.

Most of the research studies reviewed above consider an occupations course of some sort, valuable in aiding students in their vocational development. However, it has been shown by an interesting study by Romans (Hoppock and Sinick, 1960), that other factors are of greater value. Romans questioned 4,069 Colorado high school boys, their parents and teachers, using a check list entitled "Of Interest and Importance." The students placed a short course on occupations eighth, behind summer jobs and part-time jobs, as the two most important factors. The teachers rated a short course on occupations third, following a discovery of interests and abilities (first), and summer jobs (second). Parents felt that "learning what you like" was most important, followed in order by part-time jobs, summer jobs, discovering interests and abilities, and in sixth place, a short course on occupations. Although Romans found other factors to be considered of greater interest and importance to the students, teachers, and parents than a short occupations course, his

conclusions do not indicate an occupations course is valueless, or that neither he, nor the subjects of his study, would want the course to be dropped.

## V. CONCLUSIONS

It has been stated previously in this chapter that the traits of adolescence make it almost impossible for young people to form final and realistic decisions. Other adolescent characteristics (impressionability, desire to renounce childhood fantasies, natural curiosity, etc.), however, make the student at this age level very receptive to occupational exploration and a broadening of occupational horizons. Because educational decisions, which can be considered as pre-vocational ones, are demanded of students at this time, an exploratory occupations course as an aid to such decision-making is deemed extremely important. "This is the time for a youngster to size himself up, learn about the various occupations that may be open to him, and plan for the level of education that he'll aim for after high school." (Super, 1961)

The brief discussion of the various theories of vocational development revealed that vocational choice is a long, continuous process, rather than a single event, and that this process inevitably involves a compromise between a student's aspirations and expectations. Before students can

engage in a meaningful compromise, they must possess some knowledge of occupations and occupational opportunities. Thus, occupational information as an aid in this process is imperative. The theory of irreversability, (i.e., the dependency of each educational and occupational decision upon previous ones), adds further import to the value of any assistance that can be given to the early adolescent student.

Most of the experimental research cited earlier indicated beneficial effects as a result of occupations courses. Realistic occupational decisions were not greatly facilitated, but the broadening of vocational interests was facilitated. In the early adolescent years, such a broadening of interests is the prime purpose of occupational explorations. The non-experimental research showed that Grade 9 was the most frequent placement and considered the most preferred grade level for the presentation of occupational courses. A unit within another class subject was more commonly found than was a separate and accredited course. The general practice in Winnipeg schools of a weekly guidance class is unique when compared to guidance services in American schools. Thus, the occupations course within the regular guidance classes can be considered as a unit within a subject, and could also be considered, in some measure, as a separate course.

Although the review of research in U. S. schools

provides some insight as to what might be expected in an investigation of this nature in Winnipeg, the situations are not nearly similar. No research in this specific area was found among the few guidance studies that have been carried out in Canada. In view of these deficiencies in related research, and in view of the fact that the occupations course within the framework of Grade 9 guidance classes, as suggested by the Manitoba Provisional Outline of Studies, has now become the general practice in Winnipeg schools, there should be merit in any attempt to evaluate this program.

## CHAPTER III

### A STUDY OF THE SAMPLE

#### I. INTRODUCTION

Because the sample used in this study is not a random sample of the entire Winnipeg school population, and because it is the writer's contention that the findings made in this investigation would be equally applicable to other Grade 9 school situations in the system, an attempt will be made to indicate the similarity between the sample and the entire Grade 9 male population of the Winnipeg School Division. The Grade 9 students of General Wolfe will be compared to those of the entire school division on several measurable factors.

Since many research programs have indicated that a strong correlation exists between a father's occupation and the son's occupational preferences, (Kaplan, 1946; Endicott, 1931; Peters, 1941; Sanderson, 1954), a comparison of the occupations of the Winnipeg male labour force will be made with the occupations of the fathers of the sample.

Since 1963 all Winnipeg schools have been provided with a provisional outline of a program of studies for guidance classes. The contents of this program will be briefly reviewed in this chapter with reference to its application



at General Wolfe Junior High School in comparison with its application in other schools in the Winnipeg Division. A detailed description of the occupations course as presented in General Wolfe School will then be given and compared with the vocational guidance units presented in other Winnipeg schools.

## II. THE SAMPLE

The school from which the sample of this study was drawn is located in the residential district in the west end of Winnipeg. The district has usually been referred to as a middle to lower-middle class area of the city. In recent years the "downtown fringe" has been expanding into the General Wolfe district resulting in the normal sociological changes: increasing percentage of transient populations, increasing number of families recently immigrated to this country, and a general lowering of the occupational level of the labour force.

The findings of this investigation are based on the data compiled from the questionnaires of one hundred Grade 9 boys--the entire male population of that grade in General Wolfe Junior High School in Winnipeg. When the study was begun during the fall term of 1964, the male enrollment for that grade was 99. During the period in which the survey was made, five of the boys withdrew from school, four others

were transferred to other schools in the province, and one new student arrived at the school. This resulted in ninety boys being in attendance for the entire duration of the occupations course and for the pre and post-course questionnaires which were administered. All tables of comparison used in Chapter IV will be based on the ninety students who were present for the entire duration of the study.

The Dominion Test of Learning Skills (Intermediate Form) was administered to the sample during the 1962-63 term when the boys were in Grade 7. The mean I.Q. of the sample tested at that time was 107.18 with a Standard Deviation of 15.51. The mean I.Q. of all Grade 7 students tested in the Winnipeg Division in 1962-63 (i.e., the Grade 9 population of 1964-65) was almost identical: 107.7 with a Standard Deviation of 17.2. (Winnipeg School Division Annual Report, 1965)

In the realm of achievement, comparative figures also reveal a high degree of similarity between the General Wolfe sample and the entire Winnipeg School Division, as Table IV, page 50, indicates. Separate data on boys and girls results were not available; therefore the following table indicates a comparison between the total Grade 9 population at General Wolfe and the total Grade 9 population of the Winnipeg School Division. (Winnipeg School Division Research Report, 1965.)

TABLE IV

COMPARISON OF GRADE 9 ACHIEVEMENT RECORD BETWEEN  
 SAMPLE AND WINNIPEG SCHOOL DIVISION ENROLMENT  
 (BASED ON JUNE EXAMINATIONS, 1965)

|                    | GENERAL WOLFE<br>SCHOOL |          | WINNIPEG<br>SCHOOL DIVISION |          |
|--------------------|-------------------------|----------|-----------------------------|----------|
|                    | NUMBER                  | PER CENT | NUMBER                      | PER CENT |
| Repeaters          | 26                      | 13.19    | 412                         | 11.86    |
| Clear Passes       | 145                     | 73.62    | 2,400                       | 69.10    |
| Provisional Passes | 26                      | 13.19    | 661                         | 19.03    |
| Total Passes       | 171                     | 86.81    | 3,061                       | 88.13    |

The "dropout problem" becomes noticeable initially at the Grade 9 level. Retention of students at this age and grade level was higher in the sample than in the total Winnipeg Grade 9 population. Table V offers the comparison excluding students enrolled in major work special education classes, as these figures were not included in data available from the Winnipeg School Division.

TABLE V

COMPARISON BETWEEN THE SAMPLE AND THE WINNIPEG  
SCHOOL DIVISION OF THE NUMBER OF GRADE 9  
STUDENTS WITHDRAWING FROM SCHOOL

|               | ENROLMENT | NUMBER OF WITHDRAWALS | PER CENT |
|---------------|-----------|-----------------------|----------|
| Winnipeg      | 739       | 101                   | 13.6     |
| General Wolfe | 89        | 8                     | 9.9      |

From the brief evidence indicated on the preceeding pages it can be stated that the sample and the Winnipeg School Division population are almost identical in the area of mental abilities, that the sample is only slightly lower in achievement than the entire Grade 9 population (as measured by failures and passes), and that the sample has a somewhat higher percentage of student retention than the Winnipeg Grade 9 boys population.

One more facet of measurement will be used to compare

the sample with the Winnipeg School Division population. Table VI, page 53, indicates in percentages the occupations of the fathers of the students in the sample and the occupations of the Winnipeg Male Labour Force. Titles used in the comparisons are those of the Canadian Census Classification. (Dominion Bureau of Statistics, 1961)

In keeping with the earlier general description of the General Wolfe School district, there is less representation in the managerial occupations, and a greater percentage of unskilled workers than the total city figures show.

This review of comparisons regarding the mental abilities, achievement, and level and classification of occupations in which the fathers of the students are engaged indicates that the general characteristics of the sample boys do not deviate to any great extent from those of Grade 9 boys throughout the city of Winnipeg. The sample seems to reflect the general Grade 9 Winnipeg population, and therefore the findings of this investigation should be valid and applicable to the entire Winnipeg School Division.

### III. VOCATIONAL GUIDANCE AND THE PROGRAM OF STUDIES

In 1964 the provincial Department of Education issued the Provisional Outline for Guidance Grades VII - XII for Manitoba schools. The Winnipeg School Division had been using an outline since the preceding year--an outline which

TABLE VI  
 COMPARISON OF OCCUPATIONS OF FATHERS OF STUDENTS OF  
 THE SAMPLE WITH THE MALE LABOUR FORCE  
 OF THE CITY OF WINNIPEG

|                                      | WINNIPEG MALE<br>LABOUR FORCE | FATHERS OF GENERAL<br>WOLFE GRADE 9 BOYS |
|--------------------------------------|-------------------------------|--|
| Managerial                           | 12.1 %                        | 5 %                                      |
| Professional and Technical           | 8.8                           | 6  |
| Clerical                             | 11.4                          | 10                                       |
| Sales                                | 7.5                           | 10                                       |
| Service and Recreation               | 10.9                          | 13                                       |
| Transportation and<br>Communication  | 9.2                           | 11                                       |
| Farm, Fishing, Logging<br>and Mining | 1.8                           | 1  |
| Craftsmen and Related Workers        | 29.7                          | 27                                       |
| Labourers                            | 6.4                           | 11                                       |
| Other Occupations not Listed         | 2.6                           | 6  |

became the basis for the new provincial program. The year in which this investigation was carried out, therefore, represents an initial attempt to evaluate the effect of one section of that program--Vocational Guidance.

In a brief investigation of what the students in the sample had received by way of vocational guidance prior to their Grade 9 year, it was discovered that there had been virtually no study of occupations made in either Grade 7 or Grade 8. This was true not only of the sample, but also of the entire Winnipeg junior high school population. Table VII, page 55, clearly indicates that students at General Wolfe as well as those in other Winnipeg schools received for the first time a specific study of occupations in Grade 9. The data are based on information received from 17 of 19 Winnipeg junior high schools.

The study of occupations as presented in the Provis-  
ional Outline for Guidance, which was given to the students of the sample, was, in view of the evidence cited in Table VII, an almost totally new experience for the boys. Changes effected in the boys' occupational preferences would, for the most part, reflect the influence of the Grade 9 occupations course.

The Provisional Outline for Guidance suggests topics for Grade 9 in each of the four areas of guidance: educational, vocational, social, and personal. However, two units are

TABLE VII

COMPARISON BETWEEN THE SAMPLE AND THE WINNIPEG SCHOOL  
 DIVISION OF THE TIME SPENT ON THE STUDY  
 OF OCCUPATIONS IN EACH JUNIOR  
 HIGH SCHOOL GRADE

|         | NUMBER OF PERIODS PER SIX-DAY CYCLE |                          |
|---------|-------------------------------------|--------------------------|
|         | GENERAL WOLFE                       | WINNIPEG SCHOOL DIVISION |
| Grade 7 | .5                                  | .53                      |
| Grade 8 | 1.5                                 | 1.87                     |
| Grade 9 | 11                                  | 9.03                     |



singled out for emphasis. A "substantial" part of the year's program is recommended to consist of a unit on "A Survey of Occupational Areas" to be followed by a unit investigating the various high school courses available for students entering Grade 10.

At General Wolfe the first three months of the year were used to cover units on "Orientation" and "Educational Guidance" (study methods, etc.). The "Survey of Occupational Areas" was begun in December and lasted till the end of February--a total of eleven cycles. (Winnipeg secondary schools operate on a six-day cycle time-table basis.) This was followed immediately by another unit on Educational Guidance which reviewed high school courses available in Grade 10 and related them to possible future career paths. The year concluded with several topics on social and personal guidance. Thus, the guidance program conducted at General Wolfe School followed all of the general recommendations made in the provisional outline.

#### IV. THE GENERAL WOLFE OCCUPATIONS COURSE

The occupations course conducted at General Wolfe School was begun during the first cycle in December and carried on simultaneously for all Grade 9 boys till the end of February. The unit was conducted in eleven regularly time-tabled group guidance classes. The class groups con-

sisted of the boys from two co-educational classes combined for the time-tabled period of guidance. There were six Grade 9 classes in the school, resulting in three class groups of boys.

The introductory lesson of the occupations course consisted of a discussion of occupational terminology, various fields of occupations, levels of occupations and the several methods of occupational classifications. A guideline for the study of occupations was the topic of the second lesson. (Appendix D) The purpose of this lesson was to provide an organized method of further individual study of an occupation should a student develop an interest in a specific career during the course of the unit. The next seven cycles of periods were spent on a review of the fields of occupations as listed in M. D. Parmenter's Exploring Occupations-- a discussion workbook which was used as a "text" for the course and which is recommended by the provisional program of studies. The classifications of occupations according to this publication are as follows:

1. Farmers and Farm Workers
2. Fishermen, Trappers and Hunters
3. Loggers and Related Workers
4. Miners, Quarrymen and Related Workers
5. Craftsmen, Production Process and Related Workers
6. Labourers
7. Transport Occupations
8. Communications Occupations
9. Sales Occupations
10. Clerical Occupations

11. Managerial Occupations
12. Professional and Technical Occupations
13. Protective Service Occupations
14. Personal Service Occupations
15. Recreational Occupations

This review was followed by the administration of an occupational interest inventory. The test used was the California Occupational Interest Inventory by Lee and Thorpe (Grades 7 to Adult, 1956 Revision). The concluding lesson discussed in general the interest inventory which the students had completed the previous week, with a view to facilitate understanding of the interpretations. (Individual interpretations were made for each boy during the two weeks following the course.) In the concluding lesson another brief review of the occupations study guideline was made in an attempt to encourage further personal vocational explorations.

At the time of the study, General Wolfe School was not equipped with a guidance office or center. To compensate, a display board, the length of one wall of a classroom was used to present in poster and picture form the various fields of occupations discussed. This display was located in the room in which all group guidance classes were held. Materials displayed were rotated in accordance with the occupational fields being studied that week. In addition, pamphlets, books and brochures were displayed and made available for the students to read and take home. Because

many of these publications were not available in sufficient quantity to distribute to all, the boys were asked to sign for the literature which they wished to take, and to return it later. This was a voluntary act, and as such thirty boys (33 per cent of the sample) availed themselves of the opportunity to find additional information regarding several occupations which had interested them.

Guest speakers, field trips, films or filmstrips were not used during the course. This omission was partially necessitated because of pressure of time, but mainly it was one of intent. It is the writer's contention that most activities of this kind provide additional information in specific rather than general job areas--which was the focus of this course. In addition, discriminatory stress might be placed on the relatively few specific occupations which could be chosen for a visit or a film. This would not be desirable in a course which is to be basically exploratory in nature.

A minimum amount of counseling time was also available for students wishing to discuss possible careers during or after the course. Every boy who had taken the interest inventory was seen briefly during an individual counseling interview at which time the test results were explained and interpreted in terms of broad vocational fields.

At the beginning of the school term students were asked to complete a routine Junior High School Pupil Infor-

mation Form which contained one question in the form of an occupational preference blank. (Appendix B) Immediately prior and after the unit on the study of occupations an Occupational Preference Check List questionnaire was administered. (Appendix A) This Check List consisted of sixty-seven occupational titles and also blank spaces where occupations not listed could be entered. The occupational titles were arbitrarily chosen from the Canadian Census Classifications, with an attempt to include a balanced number of semi-skilled, skilled, professional and "glamour" occupations. For additional data in determining the effects of the occupations course, a General Questionnaire re Occupational Preferences was administered before and after the occupations course. (Appendix C)

#### V. VOCATIONAL GUIDANCE IN OTHER WINNIPEG JUNIOR HIGH SCHOOLS

In an effort to determine whether the practices of vocational guidance at General Wolfe were typical, an attempt was made to survey the other junior high schools in the Winnipeg School Division. Of the eighteen schools (other than General Wolfe) containing junior high grades, information was received from sixteen. Questions regarding the duration of the occupations unit, specific practices used, and personnel who conducted the vocational guidance work were asked of the counselors at each of these schools. (Appendix E)

Information gathered from this survey revealed a high degree of similarity between the sample school and other Winnipeg schools in all phases of vocational guidance--length of course, personnel conducting the course, and techniques used during the course. Table VII, page 55, indicates a similar lack of vocational guidance in Grades 7 and 8. It was also learned that in Grade 7 most of the group guidance work was conducted by various classroom teachers, that in Grade 8 the work was divided between classroom teachers and counselors, and that in Grade 9 all group guidance work was carried on by the counselors. In General Wolfe School the pattern was very much the same--classroom teachers in charge of group guidance in Grade 7, counselors conducting the classes in Grades 8 and 9.

Fifteen of the sixteen schools reporting had regularly time-tabled group guidance classes, and all of these used as their basis for discussion the recommended workbook Exploring Occupations. In all of the schools at least some counseling time was available for students desiring additional information and help. Fifteen of the sixteen schools made available for student perusal pamphlets, books, and brochures, and nearly 75 per cent of the schools had adequate poster and information displays. The General Wolfe program matched each of the above conditions and techniques.

In only two of the eleven techniques listed in Table

VIII, page 63, were there significant differences in the programs conducted. General Wolfe and only four other schools administered occupational interest inventories of various kinds, and while General Wolfe used no films or filmstrips, 50 per cent of the other schools did present these visual aids.

In summary, the survey of Winnipeg schools regarding vocational guidance at the Grade 9 level indicates that little, or no work in this field was done in either of the two preceding junior high grades, and that Grade 9 students throughout the city were indeed "exploring occupations" for the first time. Techniques, time-allotments, etc., used during the occupations course in Grade 9 were very similar in both General Wolfe and other junior high schools in the city of Winnipeg, and very much in keeping with the recommended program presented in the provisional program of studies. Although this investigation is studying the effects of an occupations course on the limited sample of a single school, it is apparent that both the program and the sample are typical of situations to be found in other Winnipeg junior high schools.

TABLE VIII

COMPARISON OF POSSIBLE VOCATIONAL GUIDANCE PRACTICES  
 BETWEEN GENERAL WOLFE AND OTHER WINNIPEG SCHOOLS

|                                       | GENERAL WOLFE | NUMBER OF OTHER<br>WINNIPEG SCHOOLS* |
|---------------------------------------|---------------|--------------------------------------|
| 1. Group Guidance                     | Yes           | 15                                   |
| 2. Counseling time                    | Yes           | 16                                   |
| 3. Display Board                      | Yes           | 15                                   |
| 4. Pamphlets and Literature           | Yes           | 11                                   |
| 5. Exploring Occupations<br>Workbook  | Yes           | 15                                   |
| 6. Vocational Interest<br>Inventories | Yes           | 4                                    |
| 7. Films and Filmstrips               | No            | 8                                    |
| 8. Guest Speakers or<br>Career Days   | No            | 0                                    |
| 9. Field Trips                        | No            | 0                                    |
| 10. Vocational Aptitude Tests         | No            | 0                                    |
| 11. Other devices                     | No            | 2                                    |

\* Possible: 16



## CHAPTER IV

### THE EVIDENCE OF THE STUDY

#### I. INTRODUCTION

The intent of this chapter is to review the basic findings of the study regarding the number of occupational preferences and the nature of changes in occupational preferences made by the students before and after the occupations course. Data were gathered chiefly from the Occupational Preference Check List questionnaire which was administered immediately before and immediately after the study of occupations. However, other sources of information submitted by the students during the year will also be used in reviewing the effects of the occupations course.

The several specific questions which were raised in Chapter I will be answered in tabular form, with discussions and explanations whenever necessary. These will include:

1. Increase in the number of preferences,
2. Changes in the nature of preferences,
3. Factors influencing occupational preferences.

Other related questions which arose during the collection and processing of data will also be presented.

In general, the investigations of this chapter will attempt to evaluate the hypothesis of the study: that the

occupations course administered at General Wolfe School significantly broadened the occupational outlook of the students as indicated by the changes and the increased number of career preferences. Conclusions which may be reached regarding the vocational development of the students at the Grade 9 level, and the degree of influence on this development by the occupations course will also be considered.

The last section of the chapter will deal with several important considerations of caution and limitations regarding the evidence of the survey.

## II. INCREASE IN NUMBER OF PREFERENCES

In reviewing the literature in the second chapter, it was found that a common description of the early adolescent regarding his vocational development was that he was in an "exploratory stage". (Buehler, as cited in Super, 1957) The adolescent is not yet ready to make decisions, but he is ready and able to explore a larger number of possibilities in preparation for decisions later. In the study cited earlier, Lincoln (as cited in Hoppock, 1963) built on this exploratory concept and viewed the number of preferences made by students at this age level as indicators of "occupational horizons". Using this concept of increased number of preferences as indicators of increased vocational development, Tables IX, page 66, and X, page 67, attempt to answer two of the basic

questions of this study as posed in Chapter I:

1. Was there a significant increase in the number of students with first-choice preferences?
2. Was there significant increase in the total number of preferences?

TABLE IX

COMPARISON OF NUMBER OF FIRST-CHOICE PREFERENCES  
ON PRE-COURSE AND POST-COURSE QUESTIONNAIRES

|  | PRE | POST |
|--|-----|------|
| Number of students with no preferences           | 14  | 4    |
| Number of students with first-choice preferences | 76  | 86   |

Table IX was tested for the Null Hypothesis by the use of the Chi Square Test. The results produced a Chi Square of 7.63, degrees of freedom: 1, and was found to be significant beyond the .01 level.

The data in Table X, page 67, referring to the number of students with no, one, two, three or four preferences was tested for significance yielding the following information: Chi Square: 39.69; degrees of freedom: 4; and significant beyond the .01 level.

In order to establish a clearer evidence of increase in the total number of preferences, Table X, page 67, figures

TABLE X

COMPARISON OF TOTAL NUMBER OF PREFERENCES ON THE  
PRE-COURSE AND POST-COURSE QUESTIONNAIRE

| PREFERENCES | PRE                |                             | POST               |                             |
|-------------|--------------------|-----------------------------|--------------------|-----------------------------|
|             | NUMBER OF STUDENTS | TOTAL NUMBER OF PREFERENCES | NUMBER OF STUDENTS | TOTAL NUMBER OF PREFERENCES |
| None        | 14                 | 0                           | 4                  | 0                           |
| One         | 4                  | 4                           | 5                  | 5                           |
| Two         | 18                 | 36                          | 5                  | 10                          |
| Three       | 52                 | 156                         | 68                 | 204                         |
| Four*       | 2                  | 8                           | 8                  | 32                          |
| TOTAL       | 90                 | 204                         | 90                 | 251                         |

\* Although students were asked for a maximum of three preferences, several students indicated a fourth alternative.

were reorganized in Table XI to measure the difference between students indicating no or one preference, and those indicating two or more preferences.

TABLE XI

COMPARISON OF NUMBER OF STUDENTS INCREASING THEIR NUMBER OF PREFERENCES FROM NONE OR ONE TO TWO OR MORE ON THE PRE-COURSE AND POST-COURSE QUESTIONNAIRE

| QUESTIONNAIRE | NONE OR ONE PREFERENCE | TWO OR MORE PREFERENCES |
|---------------|------------------------|-------------------------|
| Pre           | 18                     | 72                      |
| Post          | 9                      | 81                      |

Chi Square: 5.01      df: 1      Significant at the .03 level

Table XII, page 69, presents a comparison of the number of students whose total number of preferences have increased, decreased, or remained the same on the post-course questionnaire as compared with the pre-course questionnaire. A detailed breakdown of the totals in Table XII is provided by Table XIII, page 70.

Table XIII reveals that of the fifty-five students who had the same number of preferences on both questionnaires, only nine had indicated less than the three preferences requested. Of the fourteen students who indicated no preferences on the pre-course questionnaire, ten had made preferences on the second questionnaire; and all of these had

at least two choices in mind.

It will be noticed from Table XIII, page 70, that the number of students voluntarily indicating a fourth alternative increased on the post-course questionnaire from two to eight.

Summarizing the findings of the information revealed in Tables IX to XIII, it can be stated that the number of first-choice preferences and the number of total preferences had increased significantly.

TABLE XII

COMPARISON OF THE NUMBER OF CHANGES IN TOTAL NUMBER  
OF PREFERENCES ON THE PRE-COURSE AND  
POST-COURSE QUESTIONNAIRE

|  |    |
|--|----|
| Increased number of preferences. . . . . | 29 |
| Same number of preferences . . . . .     | 55 |
| Decreased number of preferences. . . . . | 6  |

III. CHANGES IN NATURE OF PREFERENCES

Another major question posed in Chapter I was the matter of changes in the pre-course and post-course preferences indicated by the students. The premise regarding this portion of the data will be in keeping with that used by Payne (as cited in Hoppock and Sinick, 1964) in which he regarded changes in preferences at the adolescent stage as a

TABLE XIII

NUMBER OF CHANGES IN THE NUMBER OF PREFERENCES  
MADE BY STUDENTS ON THE PRE-COURSE  
AND POST-COURSE QUESTIONNAIRE

| NUMBER OF STUDENTS              | NUMBER OF PREFERENCES |      |
|---------------------------------|-----------------------|------|
|                                 | PRE                   | POST |
| Made no changes                 |                       |      |
| 4 . . . . .                     | 0                     | 0    |
| 1 . . . . .                     | 1                     | 1    |
| 3 . . . . .                     | 2                     | 2    |
| 46 . . . . .                    | 3                     | 3    |
| 1 . . . . .                     | 4                     | 4    |
| 55                              |                       |      |
| Increased number of preferences |                       |      |
| 1 . . . . .                     | 0                     | 2    |
| 7 . . . . .                     | 0                     | 3    |
| 12 . . . . .                    | 2                     | 3    |
| 2 . . . . .                     | 1                     | 3    |
| 2 . . . . .                     | 0                     | 4    |
| 1 . . . . .                     | 1                     | 4    |
| 4 . . . . .                     | 3                     | 4    |
| 29                              |                       |      |
| Decreased number of preferences |                       |      |
| 1 . . . . .                     | 4                     | 3    |
| 1 . . . . .                     | 3                     | 2    |
| 1 . . . . .                     | 3                     | 1    |
| 3 . . . . .                     | 2                     | 1    |
| 6                               |                       |      |

yardstick for measuring the value of an occupations course. Table XIV, page 72, indicates the nature and number of changes in first-choice preferences only. (i.e., whether the students had indicated the same first-choice preference, picked a new first-choice preference from one of the alternatives on the pre-course questionnaire, or chosen an entirely new first-choice preference.) The numbers are based only on the students with first-choice preferences on both questionnaires. Table XIV, page 72, reveals that only thirty of seventy-six first-choice preferences remained the same on both pre-course and post-course questionnaires.

The nature of first-choice preferences as well as the nature of all preferences (first, second and third) was significantly changed during the period of the occupations course, as shown in Table XV, page 73. When tested for the Null Hypothesis, Table XV produced a high level of significance--beyond .01.

In summarizing Tables XIV and XV, pages 72 and 73, it can be stated that a significant number of changes were made by students regarding their first-choices and their total number of preferences. It is apparent that the students of the sample were indeed "exploring occupations".



TABLE XIV  
NATURE OF FIRST-CHOICE PREFERENCES AS INDICATED  
ON THE POST-COURSE QUESTIONNAIRE

|  | NUMBER OF STUDENTS |
|--|--------------------|
| Same first-choice preference as in<br>pre-course questionnaire                                   | 30                 |
| New first-choice preferences:<br>From alternate choices indicated on<br>pre-course questionnaire | 18                 |
| Not chosen from previous alternates  | 28                 |
| TOTAL  | 76                 |

TABLE XV  
 NATURE OF CHANGES IN ALL PREFERENCES AS INDICATED  
 ON THE POST-COURSE QUESTIONNAIRE

|  | NUMBER OF STUDENTS |
|--|--------------------|
| All three preferences changed. . . . .     | 8                  |
| Two of the three preferences changed . . . | 20                 |
| One of the three preferences changed . . . | 19                 |
| None of the preferences changed. . . . .   | 5                  |
| TOTAL*                                     | 52                 |

\* Numbers based only on students who had three preferences on both questionnaires.

#### IV. FACTORS INFLUENCING OCCUPATIONAL PREFERENCES

With the administration of the Occupational Preferences Check List Questionnaire before and after the occupations course, the students were asked to complete a General Questionnaire re Occupational Preferences. (Appendix C) The last section of this form asked students to indicate factors which they felt had influenced their current preferences. Table XVI, page 75, provides the comparison of influential factors checked by the students before and after the occupations course. Since the students were free to indicate any number of factors, each number in Table XVI represents the number of students who had checked that factor as being influential.

It will be noted from Table XVI that the only sizeable changes in the frequency with which the different factors were checked occurred in the second and third last categories --both part of the occupations course. The small response that "guidance classes" drew on the pre-course General Questionnaire re Occupational Preferences is indicative of the fact that little or no vocational guidance had been undertaken with the students in the previous grades--as cited in Chapter III, page 56. The "0" response to the item "Interest Inventory" on the pre-course General Questionnaire was predetermined by the fact that none of the students in the sample

TABLE XVI

COMPARISON OF FACTORS CHECKED BY STUDENTS ON THE GENERAL  
QUESTIONNAIRE RE OCCUPATIONAL PREFERENCES  
AS BEING INFLUENTIAL IN THEIR  
OCCUPATIONAL PREFERENCES

| INFLUENTIAL FACTOR                         | PRE  | POST                         |
|--|------|------------------------------|
| Television, Movies . . . . .               | 32   | 22                           |
| Books, Magazines . . . . .                 | 46   | 42                           |
| Parents. . . . .                           | 35   | 34                           |
| Part-time jobs . . . . .                   | 5    | 7                            |
| School subjects. . . . .                   | 35   | 34                           |
| Acquaintance with persons on the job . . . | 28   | 32                           |
| Hobbies. . . . .                           | 23   | 19                           |
| Guidance Classes . . . . .                 | 6    | 31                           |
| Interest Inventory . . . . .               | 0    | 38                           |
| Other. . . . .                             | 12   | 16                           |
| Chi Square: 111                            | df:8 | P=.001 level of significance |

had completed an interest inventory prior to Grade 9. Since no response was expected for the "Interest Inventory" factor in the pre-course General Questionnaire, this item was excluded when Table XVI was tested for the null hypothesis. The significance level was proven to be far beyond .01.

#### V. RELATED QUESTIONS

One question which came to mind during the processing of this data was: Were certain kinds of students more greatly influenced than others in the number of their occupational preferences? In an attempt to answer this query, the sample was subdivided into general achievement and ability groupings as determined by the administration of the school. Using intelligence quotients derived from the Dominion Tests of Mental Abilities and general achievement levels of previous grades, the administration of the school had placed the students into three homogeneous groups:

1. Students taking two foreign languages--Latin and French, (High ability and achievement);
2. Students taking one foreign language--French; (Average ability and achievement);
3. Students taking no foreign language, (Lower ability and achievement, several repeaters).

Table XVII, page 77, measures the difference in these various ability groups regarding the increase in the number of first-

TABLE XVII

COMPARISON OF NUMBER OF FIRST-CHOICE PREFERENCES MADE  
BY STUDENTS ACCORDING TO ABILITY GROUPING

| ABILITY GROUPS | PRE-COURSE |          | POST-COURSE |          |
|----------------|------------|----------|-------------|----------|
|                | NUMBER     | POSSIBLE | NUMBER      | POSSIBLE |
| High           | 24         | 29       | 25          | 29       |
| Average        | 28         | 35       | 35          | 35       |
| Low            | 24         | 26       | 26          | 26       |

Chi Square: 1.95

df:2

P=.4 level of significance

choice preferences. Table XVIII, page 79, shows the differences among these various ability groups regarding the increases in the total number of preferences.

Inconsistent results were obtained when testing Tables XVII and XVIII for significance. Regarding the matter of first-choice preferences, very little difference was found among the various ability groups, as the probability figure in Table XVII shows (only .4). However Table XVIII indicated a probability level beyond .01, suggesting that a significant difference did occur among the three groups in the matter of total number of preferences. On examining Table XVIII more closely, it is found that the percentage increase of the high and low ability groups is almost equal, (13.6 per cent and 15.8 per cent respectively), and that the major increase occurs with the middle group--37.3 per cent. Therefore, the lack of significant change in Table XVII, and the lack of any "pattern" of change in Table XVIII makes it impossible to draw valid conclusions regarding possible differences among the various ability groups.

Although it was not the purpose of this investigation to evaluate the changes in preferences made by the students as "better", more "realistic", or more in keeping with their tested interests, one small portion of the data was analysed to this end. From the Occupational Preferences Check-List questionnaire, those titles which were arbitrarily designated

TABLE XVIII

COMPARISON OF TOTAL NUMBER OF PREFERENCES MADE  
BY STUDENTS ACCORDING TO ABILITY GROUPING

| ABILITY GROUPS | PRE-COURSE         |                       | POST-COURSE        |                       |
|----------------|--------------------|-----------------------|--------------------|-----------------------|
|                | NUMBER OF STUDENTS | NUMBER OF PREFERENCES | NUMBER OF STUDENTS | NUMBER OF PREFERENCES |
| High           | 29                 | 66                    | 29                 | 75                    |
| Average        | 35                 | 75                    | 35                 | 103                   |
| Low            | 26                 | 63                    | 26                 | 73                    |

Chi Square: 13.26

df:2

P=.01 level of significance



as "glamour occupations" were analysed for comparison purposes. Dysinger (1951) claimed that by exploration of occupations the early adolescent begins to show reality in occupational preferences. He echoed a much earlier study by Bateman and Remmers (1938) which contended that occupational "halos" were removed when adolescents learned about vocations. If the occupations course was influential in increasing the amount of "realism" in career preferences, one might expect to find a significant decrease in the number of "glamour occupations" on the post-course Check List. Table XIX, page 81, indicates this assumption did not prove true. When tested, the table produced a Chi Square of 6.17 and with 6 degrees of freedom it was significant only at the .4 level.

It is argued by some authorities (Stubbins, 1948; Myers, 1947; Carp, 1949;) that occupational preferences are more realistic when they match in proportion the various levels of occupations occupied by the students' fathers. As shown in Table VI, page 53, only 11 per cent of the fathers of the sample were involved in professional positions. Table XX, page 82, indicates that the sample showed a much higher percentage of preferences for professional occupations on both the pre and post-course Occupational Preferences Check List. There was virtually no difference between the two Check Lists, therefore, the occupations course had made no significant influence regarding this kind of "realism".

TABLE XIX  
 COMPARISON OF THE NUMBER OF "GLAMOUR" OCCUPATIONS  
 PREFERENCES INDICATED ON THE PRE-COURSE  
 AND POST-COURSE QUESTIONNAIRES

|                        | PRE-COURSE | POST-COURSE                |
|------------------------|------------|----------------------------|
| Archeologist . . . . . | 2          | 2                          |
| Athlete. . . . .       | 15         | 8                          |
| Announcer. . . . .     | 1          | 1                          |
| Detective. . . . .     | 0          | 2                          |
| Pilot. . . . .         | 7          | 5                          |
| Musician . . . . .     | 2          | 0                          |
| Others . . . . .       | 3          | 2                          |
| Chi Square: 6.17       | df:6       | P=.4 level of significance |

TABLE XX

COMPARISON OF THE PERCENTAGE OF PROFESSIONAL OCCUPATION  
PREFERENCES ON PRE-COURSE AND POST-COURSE  
OCCUPATIONAL PREFERENCES CHECK LIST

|                | NUMBER OF<br>PREFERENCES | POSSIBLE | PERCENTAGE |
|----------------|--------------------------|----------|------------|
| Pre. . . . .   | 36                       | 76       | 47.36      |
| Post . . . . . | 41                       | 86       | 47.67      |

One of the major reasons for including an occupations course within the framework of guidance classes in the junior high grades is the hope that occupational information and planning will result in students making suitable educational choices at the high school level. Did the occupations course significantly affect educational plans? Table XXI, page 84, indicates that no significant change had resulted.

However, a comparison of Tables XXI and XX shows that the number of students preferring professional occupations approximates the number of students planning on university attendance. If the high percentage of students aiming at professional level of occupations is unrealistic (47 per cent on both pre and post-course Occupational Preferences Check Lists--Table XX), then the educational aspirations of the students in the sample are similarly unrealistic (48.88 per cent on the pre-course and 55.55 per cent on the post-course General Questionnaire re Occupational Preferences--Table XXI). Both assumptions are questionable and are not the concern of this study. What is of importance to this study, however, is the fact that in neither of the above comparative measurements was there significant change effected by the occupations course which the students had taken.

In summarizing this section with reference to the various related questions which were briefly investigated:

1. Differences in number and changes of preferences

TABLE XXI  
 COMPARISON OF EDUCATIONAL PLANS AS INDICATED ON THE  
 PRE AND POST-COURSE GENERAL QUESTIONNAIRES  
 RE OCCUPATIONAL PREFERENCES

|                                      | PRE-COURSE | POST-COURSE |
|--------------------------------------|------------|-------------|
| Quit at age sixteen. . . . .         | 1          | 1           |
| Grade 9. . . . .                     | 1          | 0           |
| Grade 10 . . . . .                   | 1          | 1           |
| Grade 11 . . . . .                   | 5          | 1           |
| Grade 12 . . . . .                   | 30         | 27          |
| Manitoba Institute of Technology . . | 8          | 10          |
| University . . . . .                 | 44         | 50          |

Chi Square: 5.63      df:6      Significant only at .5 level

among various ability groups,

2. Increased realism in occupational choice,

3. Changes in educational planning,

it would appear that the null hypothesis--no significant change--had resulted from the administering of the occupations course.

#### VI. CAUTIONS REGARDING RESULTS

It has been shown that the thesis regarding the increased number of preferences and the changes in preferences has been supported. (Tables IX to XV, pages 66 to 73) However, closer examination of the data also reveals that small groups of students have, in fact, tended to reverse the significant trends.

Table XIII, page 70, shows that six boys had reduced the number of preferences on the post-course Occupational Preferences Check List--the reverse of the hypothesis. Even after a closer investigation of the data of the six students involved, it is difficult to establish reasons for their actions. Endler (1961) argues that "eliminating certain alternatives" is a part of vocational development. With this concept in mind, it might be claimed that the students had narrowed their interests towards one definite career decision. However, only two of the six students had repeated their first-choice preference while eliminating the alternatives.

The other four students all had indicated an entirely new first-choice preference on the post-course Occupational Preferences Check List--it had not been one of the preferences on the pre-course Check List. Only one boy of the six indicated a trend towards a "clustering" of related occupations in the post-course Check List. However, all six boys did make changes in at least some of the three preferences, indicating possible exploration and development in their vocational thinking. (This conclusion matches the findings presented in Table XV, page 73.)

Because of the small number involved and an apparent lack of consistency of the nature of the changes and reductions of preferences, it is impossible to draw any valid conclusions regarding this aspect of the data. What is important, however, is the fact that only six of ninety students reduced their number of preferences as compared to twenty-nine who increased their number of preferences, and an additional fifty-five who changed some or all of their preferences. (It should be noted that Table XV, page 73, which showed changes in preferences, considered only those students having three preferences on both the pre and post-course Occupational Preferences Check Lists.)

With reference to Table XIII, page 70, it can be seen that there were ten boys who did not increase their number of preferences to three on the post-course Occupational

Preferences Check List. An attempt was made to discover whether a significant number of changes had occurred. Table XXII obviously indicates negative results--that the number of changes of preferences by these students was insufficient to be considered significant.

TABLE XXII

NATURE OF PREFERENCES ON THE POST-COURSE OCCUPATIONAL  
PREFERENCES CHECK LIST OF THOSE STUDENTS  
HAVING LESS THAN THREE PREFERENCES

|                                  | NUMBER OF STUDENTS |
|----------------------------------|--------------------|
| Same preferences . . . . .       | 6                  |
| Changes in preferences . . . . . | 4                  |

The nature of the Occupational Preferences Check List creates another area of caution regarding the results. Shosteck (1955) claims that adolescent students are "unconsciously unrealistic" regarding their occupational preferences in that they will respond more readily to socially acceptable occupations in such kinds of questionnaires. Unfortunately, the kind of data collected makes it impossible to confirm or negate such claims in this study.

However, a different kind of "unrealism" may be evident in this study. Although the students were not confronted with a "forced-response" regarding the Occupational



Preference Check List, there is cause to believe that the nature of the questionnaire (sixty-seven choices) did, in fact, encourage a much greater response than did an "open-end" questionnaire. All students were asked to complete a Junior High Student Information Form (Appendix B) at the beginning of the fall term (September). This is a routine form which is not specifically a part of the occupations course and has only a few questions relating to vocational or educational planning. One question is in the form of an "open-end" blank, asking students to indicate their vocational plans, if any. Table XXIII, page 89, compares the results of the students' responses showing that there was a significant increase in responses on the Occupational Preference Check List as compared to the relatively few responses on the "open-end" blank on the Junior High Student Information Form.

## VII. CONCLUSIONS

The central thesis of this investigation, as discussed in Chapter I, is that the occupational planning and outlook of Grade 9 students is broadened or initiated by the administering of an occupations course. The "broadening or initiating" of occupational planning, for the purposes of this study, were the measured increases or changes in occupational preferences as indicated in the aforementioned check lists and questionnaire. This chapter has attempted to test the

TABLE XXIII

COMPARISON OF THE NUMBER OF CHOICES MADE ON THE  
 JUNIOR HIGH SCHOOL PUPIL INFORMATION FORM  
 AND THE PRE-COURSE OCCUPATIONAL  
 PREFERENCE CHECK LIST

| NUMBER<br>OF<br>CHOICES | JUNIOR HIGH SCHOOL<br>PUPIL INFORMATION FORM |          |          | PRE-COURSE OCCUPATIONAL<br>PREFERENCE CHECK LIST |          |          |
|-------------------------|--|----------|----------|--|----------|----------|
|                         | NUMBER                                       | POSSIBLE | PER CENT | NUMBER   | POSSIBLE | PER CENT |
| None                    | 35   | 85*      | 41.18    | 14   | 90       | 15.56    |
| One                     | 28   | 85       | 32.94    | 4  | 90       | 4.44     |
| Two                     | 15   | 85       | 17.64    | 19   | 90       | 21.11    |
| Three                   | 7  | 85       | 8.24     | 53   | 90       | 58.89    |

\* Number of students who had completed the Junior High School Pupil Information Form in September.

validity of such a thesis and has also examined other questions relating to occupational planning.

A clear delineation can be made between those questions which were supported by the data and those which found no significant statistical proof. Whenever related questions were tested for significance--realism of occupational preferences, educational planning--no conclusive evidence supporting the value of the occupations course could be established.

However, in all the major areas of the study, the value of the occupations course (as significantly influencing occupational thinking) was supported by the tested data. Statistically significant influences were found in each of the following areas:

1. Increased number of students with first choices,
2. Increased number of preferences,
3. Increased number of changes in first-choice preferences,
4. Increased number of changes in all preferences,
5. Factors influencing changes in occupational preferences.

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### I. INTRODUCTION

The intent of this closing chapter is to review the conclusions reached as a result of the investigations, and to suggest several possible recommendations that may, therefore, have meaningful implications for the educational development of students in Manitoba schools.

Of major concern will be the question of the conflict between the need for exploring occupations and developing more mature vocational planning on the one hand, and the demands which our educational system makes on our youth for early course decisions on the other. Some recommendations aimed at alleviating this conflict, at least in part, will be made.

This investigation, its conclusions and limitations, suggest other areas of research. These and a general summation of future needs will form the conclusion of this study.

#### II. SUMMARY OF RESULTS

Page 10 of Chapter I outlines the hypothesis upon which this investigation was carried out. The major premise states that the occupational outlook of Grade 9 male students

would be broadened as reflected by:

- A. Increased number of students with first-choice preferences;
- B. Significant number of changes in first-choice preferences;
- C. Increased number of students with alternative preferences.

The tested data of Tables IX to XV, pages 66 to 73, revealed that a significant change had been effected by the occupations course in each of the three major areas cited above, indicating that the students' occupational horizons had been broadened by the exploratory nature of the occupations course.

A secondary portion of the hypothesis states that a significantly increased number of students would indicate by their own evaluation that the occupations course had been an influential factor in making their occupational preferences. This premise was tested and found to be true as shown in the data of Table XVI, page 75, in Chapter IV.

Page 5, Chapter I, lists several areas of concern which it was hoped would be illuminated by the findings of this study. Referring to number 1--the general vocational thinking of adolescent boys in junior high schools--the significant changes in vocational preferences made by the students after a brief occupations course seem to verify the general conclusions of the authors reviewed in Chapter II.

For example, Grade 9 male students are in a period of change (Josselyn, 1952), are ready for occupational exploration but not decision-making (Super, 1957, and are not necessarily realistic about their educational and occupational planning (Super, 1960, Stubbins, 1948).

These conclusions increase the dimension of the other problems cited on pages 5 and 6--the educational choices our students are asked to make at the end of Grade 9 regarding high school courses, and the problem of the potential drop-out who will not be spending several more years in high school where he would have the opportunity for more gradual and positive vocational development. These matters will be discussed more fully in later pages of this chapter.

Other related questions, when tested for significance, produced negative or inconsistent results. Therefore, no conclusions or recommendations can be properly made regarding such matters as realism of occupational preferences, educational planning, and different degrees of influence of an occupations course on students of various ability levels. The absence of possible conclusions in these areas suggests topics for further research to be discussed in later pages of this chapter.

### III. THE PROBLEM OF EARLY CHOICES

The grade and course structure of the Manitoba educa-

tional system is such that Grade 9 is the first critical year the student faces in terms of educational-vocational planning, in that he must choose one of the following high school courses:

1. University Entrance,
2. General,
3. Commercial,
4. Industrial or Vocational,
5. High School Leaving (several kinds of programs: i.e., the terminal programs of Occupational Entrance Course in the Winnipeg School Division).

Of the above list, only the last course is usually not of the student's choice. Placement in it is based on lack of ability or lack of past achievement. If the student is able to pass the regular junior high school program, and if he is in a school division which offers each of the above courses, he is free to choose any of the courses mentioned. (It is conceded that very few high schools in the province offer all courses. However, most schools or school divisions offer more than one course. With the increasing trend toward larger divisions and composite high schools, it is obvious that the aim of such educational shifts is to make it possible for students to have the opportunity of maximum choice no matter where they live.) This decision is demanded usually in late winter or early spring of the Grade 9 year---a time when most students

are just fourteen years of age. Only the University Entrance course leaves all doors open for the student. A choice of the other courses--for which the student may be more suited or in which he may have a greater interest--may prevent complete freedom of educational and occupational pathways later in his life. (Although it is possible for students to change their high school courses at the end of any given year, the process is difficult and, as such, discouraging to the students.) This first decision, thus, becomes a major factor in the students' career pattern.

In reviewing the problem of early educational decisions, the following factors must be considered:

1. The increases in the numbers of preferences and the changes in preferences, as cited in Tables IX to XV, pages 66 to 73, indicate that these students were, in fact, not choosing occupations, but merely expressing temporary preferences which are subject to further change with exposure to further occupational information, work experience, etc.
2. According to the research of Ginzberg and associates, every educational or vocational choice has an irreversible effect on later career developments.
3. The findings of this investigation coincide with the major conclusion which Super reaches with regard to Grade 9 boys--that their vocational maturity has not



yet reached the stage of decision-making, but is still at the exploratory level.

4. The lack of previous vocational guidance (Table VII, page 55) indicates that current preferences are based on a wide assortment of factors in addition to the brief occupations course in Grade 9. They are not the result of long-term planning and vocational studying.
5. Lack of evidence in the investigation regarding either the clustering of occupational preferences or realism in preferences indicates a lack of awareness of related occupations or even of large vocational fields.

The preceding statements challenge the wisdom of demanding such an important decision at such an early age. One answer to the problem of early choice would be to remove the need for a decision by providing only a single general type course for all students entering high school, and thus delay "streaming" of any kind until later. Of course such a recommendation is unthinkable for it would negate the concern for individual differences of our students, reduce the possibility of utilizing the concept of strengths and weaknesses of students, and severely handicap the preparation for specialized training required of our students in an ever-increasing technological society. A compromise suggestion

must be found to take into consideration the demands of an increasingly skilled labour force and the disadvantages of early educational decision-making. Henry Borow's concept of "lead time" may be relevant to the situation which exists in Manitoba. Borow (1967) interprets "lead time" as an adequate period of years for vocational guidance before any major educational-vocational decisions should be made. At the time of this investigation, virtually no formal vocational guidance was given to any students in the Winnipeg School Division prior to Grade 9 (Table VII, page 55). The amount of "lead time" the students had in this case, therefore, amounted to just three months of an occupations course plus one month of reviewing high school courses prior to their first major career-pattern decision. Obviously this is an inadequate amount of preparation for a decision of such importance in the students' lives.

The literature of the field does not present a singular viewpoint on the matter of early vocational guidance. Sanderson (1951) states that since occupational entry is a remote thought to most elementary and junior high school students, guidance should concern itself only with educational planning during these years. Hoppock (1949) also suggests that the stress in group guidance classes in junior high grades should be on educational planning and that "Occupational information is introduced only as it is related to this immediate problem".

Most authorities agree, however, that educational and vocational planning must be accompanied by vocational guidance. Myers (1947) claims that "Many of the educational choices which the individual must make are strongly influenced by vocational considerations." Jones (1951) concedes the "Basic educational decisions must be made at this time which will have lasting repercussions." Super (1957) views educational choices as preliminary vocational choices.

Researchers in the field of vocational development are also agreed that vocational choice is a process rather than a single event:

In the process a person collects information about jobs, makes a tentative choice of a vocation, changes his mind, collects new information, and makes new tentative choices over a long period of time. (Hatch and Costar, 1961)

If the above description of the process is reasonably accurate, it is imperative that vocational guidance should begin long before the grade in which students are asked to make their first important career pattern decisions.

Wrenn (1962), discussing the role of the counselor in a changing world, suggests that vocational guidance should begin in the upper elementary grades in order to assist those students who will be quitting school before they graduate. Venn, arguing from the standpoint of the manpower needs of society, states:

The development of understanding of one's future occupational role begins at the intermediate (upper elementary) grade levels, and it is at that level that the interaction between education and occupation should be presented to the pupil. (Venn, 1964)

Parmenter also advocates that vocational guidance begin in earlier grades:

... to assist and encourage the student in arriving gradually at a tentative choice of an occupation, a cluster or constellation of occupations, or a work or study field, so that he may have meaningful objectives toward which to plan and strive. (Parmenter, 1965)

Borow suggests that the school's guidance program-- regarding vocational and educational planning--should match the pattern of vocational development in the students:

Following a general model, the client widens his vocational horizon and then narrows his field, eventually selecting a field of work or specific occupation. (Borow, 1964)

The Supervisor of Guidance for the Winnipeg School Division, H. H. Guest (1964) suggests a similar "diamond-shape" approach--Grades 7, 8, and 9 are used to expand the vocational horizons of students, and the narrowing process occurs during Grades 10, 11, and 12. Grade 9 is, thus, seen as the apex of vocational exploration. (The title of the recommended workbook for the Grade 9 vocational guidance unit indicates the aim of the course--Exploring Occupations.) Yet, in Manitoba it is at this stage that our educational structure demands a specific, and in some cases a delimiting decision from the students regarding further high school studies.

A few weeks of an occupations course followed by another few weeks of educational planning cannot be considered adequate exploration time, therefore, it may prove advantageous for vocational guidance to be started in the earlier grades:

The exploratory phases require much time and travel. To wait until the pupil is in the junior high school serves only to reduce the size and scope of his exploration period. A planned program of occupational exploration in the elementary school makes it possible for the secondary school pupil to make more valid decisions about his educational plans based on the information he has assimilated. (Hatch and Costar, 1961)

Earlier vocational guidance will not only assist the educational planning of those students who are intending on school graduation, but will also serve the school drop-out. Grade 9 is usually the first school level at which the drop-out problem becomes a noticeable reality. (Table V, page 51) In the Winnipeg School Division, any student withdrawing from formal schooling during or before Grade 9 receives virtually no occupational guidance or information. (Table VII, page 55)

Recent surveys of early school leavers indicate that the proportion of children entering the first grade who graduate from high school is still far too small. A large percent never enter the senior high school. This emphasizes a need for information about occupations for those pupils who go directly into some occupation before being graduated from high school. The vast amount of information to be presented makes it virtually impossible to withhold occupational exploration until the junior high school years. A gradual exposure to vocations in the elementary school builds a reservoir of information upon which the early school leaver may make a more satisfactory vocational choice. (Hatch and Costar, 1961)

Several recommendations come to mind, therefore, in an attempt to provide more "lead time" for our students prior to making their high school course decisions, and to provide adequate vocational guidance for those who will not be completing their schooling.

#### IV. RECOMMENDATIONS

The recommendations which will be made in this section are based on the following inferences:

A. The significant increases and changes in preferences as tested in Tables IX to XV, pages 66 to 73, were not accompanied by significant changes in educational plans. (Table XXI, page 84) This suggests that the program failed to adequately relate vocational objectives to educational planning.

B. Table VII, page 55, indicates an almost complete lack of vocational guidance prior to this grade.

C. Authorities in the field of vocational development agree that earlier vocational guidance will result in an increased probability of sounder educational and vocational decisions.

It is, therefore, recommended:

1. That the occupations course, which was the subject of this study, be administered within the present framework of group guidance classes in Grades 7 or 8 instead of Grade 9. (The Provisional Outline for Guidance used at the time of writing recommended a Grade 9 placement of the occupations

course unit. The new Program of Studies for Guidance recommends Grade 8. Further experimentation with such a program in Grade 7 is also recommended.)

2. That a Program of Studies be established for the elementary school grades and that this program include information for teachers regarding vocational development, occupational information and specific suggestions regarding how units for occupational exploration might be implemented within the framework of the regular instructional program. (There is no doubt that many of our present-day elementary school teachers include surveys of local community occupations, reports on fathers' occupations, etc., in connection with social studies classes or other areas of the school curriculum. But it is the writer's contention that these incidental activities are limited in scope and are carried out merely as aids to other subject matter, rather than as purposeful study of the world of work from a vocational guidance point of view.)

3. That the testing program in the schools be expanded to include both aptitude batteries and interest inventories in the junior high school grades. The general practice in the Winnipeg School Division has been to administer the DAT and the Kuder Vocational in Grades 10 or 11. Studies by Tiedeman and O'Hara (Borow, 1964) indicate that interests are the major factor in occupational preferences during the junior high school years, and that by Grade 10, interests are

no longer dominant in vocational choices. In the Career Decisions of Canadian Youth survey conducted in 1964-66, more than a quarter of the senior high school students indicated that "They did not know their own interests and abilities well enough to decide about their career." Earlier diagnostic methods would be helpful to the student in his gradual self-appraisal. It is not recommended that the junior high testing program replace that of the senior high grades. Rather it should augment the program by allowing for earlier objective self-appraisal. An interest survey in Grade 8 followed by an aptitude battery test in the early portion of Grade 9 would allow for more "lead time" in considering the educational decision to be made at the end of Grade 9.

4. That some adequate form of inspection (either by the officially appointed inspectors of the Instruction Department or by members of the Guidance Branch) be exercised to ensure that the major areas of the Guidance Program of Studies are covered at the times recommended. In Winnipeg, one of the more advanced school divisions in the field of guidance in Manitoba, the suggested coverage of vocational guidance for Grades 7 and 8 has been sadly neglected.

5. That adequate provision be made in the training of elementary school teachers to equip them with principles and practices of a guidance viewpoint and guidance services (including vocational) in the classroom. At present, students



enrolled in the secondary program of the Faculty of Education receive several courses or seminars in the field of guidance, but the students in the Education I-A or I-B courses, from which most of our elementary school teachers graduate, receive no compulsory guidance work. Further, it is recommended that for the teachers already in the elementary school, credit courses, professional courses or in-service training be made available. One step in this direction has already been taken in that the Department of Education has offered a general introductory course to Guidance in the Elementary School in two areas of the province in the 1967-68 school term.

6. That more time for individual counseling be allotted in the junior high grades. With the earlier administration of the occupations unit, and with a testing program suggested for earlier grades, the need for more counseling time becomes obvious. The concept of full-time counselors or guidance workers has only recently been accepted in some of the senior high schools in Winnipeg. Although all schools surveyed provided for some junior high school counseling, this was limited almost entirely to Grade 9 students, and constituted a very inadequate amount of time. Also, since full-time guidance counselors are not placed in Winnipeg junior high schools, the junior high teachers of guidance must unfortunately divide their time and attention between academic subjects and the guidance program, probably to the

detriment of both. Any increases in group guidance services, as indicated by the recommendations above, must be accompanied by the allotment of more counseling time to junior high school counselors. Consideration should also be given to the establishment of some counseling time in the elementary grades. At the present stage of guidance development in Manitoba, it is questionable whether specially qualified and full-time counselors in the elementary grades would be practicable. Cost of the services and lack of qualified personnel make this suggestion infeasible at the present time. However, certain teachers on the elementary school staff might be given the responsibility of specializing to some degree in guidance services and part-time counseling, just as others on the staff "specialize" in music or physical education.

7. That entrance to and changes in the various high school courses be made more flexible. Although provisions now exist for changes to be made from one course to another, they are difficult and, therefore, discouraging to the students who might adequately be able to make the change. The importance and potential danger of the Grade 9 choice regarding high school courses would be lessened if there were more flexibility in the senior high grades. The acceptance of "A" and "B" type subject courses in the high school grades would allow for easier adjustments in the students' educational paths.

In summing up the above recommendations, it will be noted that numbers 1 to 5 are aimed at providing more "lead time" for the students before they are asked to make an educational decision that will probably have an irreversible effect on their career paths. The last recommendation is made with the admission that even if vocational guidance is started earlier in our schools, the age and vocational maturity of the students is such that in many cases unrealistic or unsuitable decisions will be made. Some provision must, therefore, be made to allow for adjustments in later years.

#### V. SUGGESTED AREAS OF FURTHER RESEARCH

Up to this time---the mid 1960's---an almost complete dearth of research on vocational guidance programs has existed in Manitoba. Many questions relating to the effectiveness of vocational guidance programs in Winnipeg and Manitoba schools were left unanswered by the investigations of this study. Many changes in the field of guidance generally and in the specific guidance areas (i.e., vocational), are currently being implemented and contemplated by the provincial department and local school divisions. For these reasons the need for an increasing number of research projects to measure the value and effectiveness of current and contemplated programs becomes evident. The conclusions and lack of conclusions of this study suggest several areas of further

research as listed below:

1. This investigation has attempted to measure the effects of an occupations course administered at the Grade 9 level. The new Program of Studies recommends this unit be administered in Grade 8. A similar study, therefore, measuring the effects of an occupations course at that grade level would be of value in determining the degree of occupational exploration and vocational maturity of eighth graders, and in determining the correct placement of such a unit in group guidance. In order to overcome the limitations of this investigation, as cited in Chapter III, a control group-experimental group study or an investigation involving sampling from the whole Winnipeg School Division would be preferable.

2. Formal guidance programs in elementary schools have not yet become a reality in this province. However, recent actions by the Department of Education indicate that such advances may soon be launched. One of the recommendations of this study states that vocational guidance should begin in earlier grades than is currently being done. An attempt to evaluate to what degree occupational guidance is being presented at the elementary grades level in informal or incidental ways--as part of other subject matter--would be a valuable study in determining how and at what level any new more formal guidance programs might best be instituted.

3. Tables IX to XV, pages 66 to 73, prove that the occupations course in Grade 9 had significant effects in the occupational thinking of the students. However, Table XXI, page 84, fails to reflect any significant adjustments in the students' educational planning. The relationship between educational planning and vocational preferences does not appear to be as meaningful to the students as one would expect. A survey which would attempt to compare those factors influencing vocational preferences with those influencing educational plans might provide some insight into this discrepancy problem which apparently exists. Such a research project may also be helpful in determining the direction and emphases of future vocational-educational guidance.

4. Some investigation attempting to define the vocational guidance needs of students of low ability, low achievement and/or low motivation--the potential drop-out--should be undertaken. And further, an attempt to determine whether an occupations course of the nature examined in this study is adequate to meet the needs of these students.

5. The Guidance Branch of the Department of Education is currently advocating use of the DAT in Grade 9. One of the above recommendations suggested use of an interest inventory in Grade 8. Should this procedure be carried out in any of Manitoba's school divisions, a research program attempting to measure the degree of realism--as reflected by vocational

preferences and their relation to aptitude and interest scores --should be undertaken.

6. Because no studies have yet been made in Manitoba regarding the relative success of Grade 9 students' high school course choices, this area suggests further research. As previously stated, a discrepancy exists between the students' occupational preferences and their educational aspirations. Is this an indication that the occupations course failed to relate adequately and realistically vocational and educational planning? A long-term study evaluating the students' degree of satisfaction with and success in the high school course of their choice would be valuable.

## VI. CONCLUSION

This investigation was begun with the intention of discovering whether the occupations course unit administered to Grade 9 male students significantly broadened their occupational horizons. The hypothesis proved true as indicated by the increases in first-choice preferences, total number of preferences and changes in preferences (Tables IX to XV, pages 66 to 73), as well as by the students' own evaluation of factors influencing their occupational preferences (Table XVI, page 75). The data in the above mentioned tables were tested by means of Chi Square. The significance of the students' abundant changes, plus the evidence of other

research (some of which has been discussed on previous pages), strongly indicates that students at this age level are still very much in a state of change, and that their vocational maturity is underdeveloped for specific occupational decisions to be made.

However, some pre-vocational choice must be made during this grade. The several recommendations expressed earlier in this chapter were aimed at providing more and earlier assistance in vocational guidance as well as reducing the finality or delimitation of the choices made at the end of Grade 9. Even with much earlier and more effective vocational guidance, Grade 9 students will still be mainly exploring the world of work. Later educational paths must be flexible. For a small portion of the student body--the early school leaver--occupational guidance will have a more direct and more meaningful role to play. Further research, curriculum planning and experimentation are urgently needed in order that both types of students--those using junior high vocational guidance as an aid in their educational planning and those using guidance in these grades as preparation for direct entry into the world of work--are served as adequately as possible in group guidance classes.

Guidance personnel in today's schools have two broad purposes. As pupil personnel workers, whose duty is to serve the needs of the students, they have the responsibility of

accomplishing the central objective of vocational guidance: helping students realize their potential and assisting them in making their own realistic decisions regarding future vocational goals. Also, as members of the teaching profession in a public school system serving the needs of society, they must offer meaningful guidance services in order that the youth of today may more adequately meet the challenging demands of our rapidly advancing technological world of work.

In order for both of these functions to flourish, much attention, evaluation and adjustment should be made in the practices of vocational guidance in the schools of Manitoba.



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APPENDIX A

OCCUPATIONAL PREFERENCE CHECK LIST

NAME: \_\_\_\_\_ ROOM NUMBER: \_\_\_\_\_

Number in order of preference (1, 2, 3) those occupations which you are considering as a future career. If an occupation which you are considering is not listed below, add it to the bottom of the third column. If you have not yet made any plans for a future career, place a check mark here: \_\_\_\_\_

|                            |       |                        |       |                      |       |
|----------------------------|-------|------------------------|-------|----------------------|-------|
| Accountant . . . . .       | _____ | Electrician. . . . .   | _____ | Postman. . . . .     | _____ |
| Actor. . . . .             | _____ | Electronics            |       | Printer. . . . .     | _____ |
| Airline Pilot. . . . .     | _____ | Technician . . . . .   | _____ | Professional         |       |
| Archaeologist . . . . .    | _____ | Professional           |       | Athlete. . . . .     | _____ |
| Architect. . . . .         | _____ | Engineer . . . . .     | _____ | Radio                |       |
| Armed Services . . . . .   | _____ | Locomotive             |       | Announcer. . . . .   | _____ |
| Auto Mechanic. . . . .     | _____ | Engineer . . . . .     | _____ | Real Estate          |       |
| Bank Teller. . . . .       | _____ | Farmer . . . . .       | _____ | Agent. . . . .       | _____ |
| Barber . . . . .           | _____ | Fireman. . . . .       | _____ | Salesman . . . . .   | _____ |
| Bookkeeper . . . . .       | _____ | Forest Ranger. . . . . | _____ | Sheet Metal          |       |
| Bricklayer . . . . .       | _____ | Geologist. . . . .     | _____ | Worker . . . . .     | _____ |
| Bus Driver . . . . .       | _____ | Industrial             |       | Shipper. . . . .     | _____ |
| Business Machine           |       | Designer . . . . .     | _____ | Social Worker        |       |
| Operator . . . . .         | _____ | Lawyer . . . . .       | _____ | Tailor . . . . .     | _____ |
| Carpenter. . . . .         | _____ | Life Insurance         |       | Taxi Driver. . . . . | _____ |
| Cashier. . . . .           | _____ | Salesman . . . . .     | _____ | Truck Driver         |       |
| Chef . . . . .             | _____ | Machinist. . . . .     | _____ | Teacher. . . . .     | _____ |
| Chemist. . . . .           | _____ | Medical Lab            |       | TV Repairman         |       |
| Clergyman. . . . .         | _____ | Technician . . . . .   | _____ | Waiter . . . . .     | _____ |
| Clerk. . . . .             | _____ | Meteorologist. . . . . | _____ | Welder . . . . .     | _____ |
| Commercial Artist. . . . . | _____ | Miner. . . . .         | _____ | X - Ray              |       |
| Construction               |       | Musician . . . . .     | _____ | Technician           |       |
| Worker . . . . .           | _____ | Newsreporter . . . . . | _____ | Others:              |       |
| Conservation               |       | Office Manager         |       |                      |       |
| Officer. . . . .           | _____ | Painter. . . . .       | _____ | . . . . .            | _____ |
| Dentist. . . . .           | _____ | Pharmacist . . . . .   | _____ | . . . . .            | _____ |
| Detective. . . . .         | _____ | Plasterer. . . . .     | _____ | . . . . .            | _____ |
| Doctor . . . . .           | _____ | Plumber. . . . .       | _____ | . . . . .            | _____ |
| Draughtsman. . . . .       | _____ | Policeman. . . . .     | _____ | . . . . .            | _____ |
|                            |       | Politician . . . . .   | _____ | . . . . .            | _____ |

APPENDIX B

The Winnipeg School Division No. 1  
JUNIOR HIGH SCHOOL PUPIL INFORMATION FORM

This form is to help your teachers to know you better, and to give some information which may be useful in an emergency or in discussing privately with you questions such as the selection of courses for a career. You are not compelled to answer any questions, but the more complete and truthful our answers are the better you will be understood.

Name \_\_\_\_\_ School \_\_\_\_\_  
(Print clearly last name, then first name) Grade \_\_\_\_\_ Room \_\_\_\_\_ Date \_\_\_\_\_ 19\_\_\_\_

Address \_\_\_\_\_ Phone \_\_\_\_\_ Date of birth \_\_\_\_\_  
Father's name \_\_\_\_\_ Address \_\_\_\_\_ (day, mo., year)

Occupation \_\_\_\_\_ Employer \_\_\_\_\_ Phone \_\_\_\_\_

Mother's name \_\_\_\_\_ Address \_\_\_\_\_

Occupation \_\_\_\_\_ Employer \_\_\_\_\_ Phone \_\_\_\_\_

Brothers and Sisters: List in order, oldest first, including any who have died. Leave yourself out. You may put "adult" for ages over 21. Put "away" in the margin in front of any who do not live at our home now.

| <u>Name</u> | <u>Age</u> | <u>Occupation</u> | <u>School and Grade, or Employer</u> |
|-------------|------------|-------------------|--------------------------------------|
| _____       | _____      | _____             | _____                                |
| _____       | _____      | _____             | _____                                |
| _____       | _____      | _____             | _____                                |
| _____       | _____      | _____             | _____                                |
| _____       | _____      | _____             | _____                                |
| _____       | _____      | _____             | _____                                |
| _____       | _____      | _____             | _____                                |
| _____       | _____      | _____             | _____                                |

Other people living in your home: Names \_\_\_\_\_

Family doctor's name \_\_\_\_\_ Address \_\_\_\_\_

School Experiences \_\_\_\_\_  
Special circumstances, e.g. three grades in two years, grade repeated (because --) lengthy absence because of illness, specialist help in reading, speech, sight-saving, etc., trouble with --, chosen as --, etc.

| <u>Grade</u> | <u>School</u> |
|--------------|---------------|
| 1            | _____         |
| 2            | _____         |
| 3            | _____         |
| 4            | _____         |
| 5            | _____         |
| 6            | _____         |

Are you now in the class you believe you should be in? \_\_\_\_\_ If not, explain: \_\_\_\_\_

What subject, if any, is very difficult for you? \_\_\_\_\_

C. Other Activities

What sports do you take part in? \_\_\_\_\_

What hobbies have you? \_\_\_\_\_

What is your favorite type of reading? \_\_\_\_\_

What groups, clubs, teams, etc. will you belong to this year? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What offices or positions of leadership have you held? \_\_\_\_\_

\_\_\_\_\_

What prizes, awards, or honors have you received? \_\_\_\_\_

\_\_\_\_\_

What courses or lessons have you ever taken outside of school? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What do you plan to take this year? \_\_\_\_\_

What leisure-time activities would you like to join this year, in or out of school? \_\_\_\_\_

\_\_\_\_\_

About how much time each day do you spend watching television? \_\_\_\_\_

D. Vocation and Employment

What occupations are you considering? 1. \_\_\_\_\_

2. \_\_\_\_\_ 3. \_\_\_\_\_

What would your family like you to be? \_\_\_\_\_

What part-time jobs have you had? \_\_\_\_\_

What job have you now? \_\_\_\_\_ for \_\_\_\_\_ hours per

How much do you earn? \_\_\_\_\_ Have you a work permit? \_\_\_\_\_

E. Your Home

Have you a room of your own? \_\_\_\_\_ If not, with whom do you share it? \_\_\_\_\_

Where do you do your homework? \_\_\_\_\_ When? \_\_\_\_\_

What are your chores at home? \_\_\_\_\_

What recreation do you and your family enjoy together? \_\_\_\_\_

Your Friends

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Name three of your best friends \_\_\_\_\_

Do you belong to a "gang"? \_\_\_\_\_ Might some of its activities get you into trouble? \_\_\_\_\_

If your class were divided into committees for a study project, with which of your classmates would you like to work? First choice \_\_\_\_\_; Second choice \_\_\_\_\_

Third choice \_\_\_\_\_ If you were worried about something, with whom would you feel most free to discuss it? \_\_\_\_\_

Yourself

Is your general health and physical condition good, fair, or poor? \_\_\_\_\_ If not "good", explain briefly. \_\_\_\_\_

Do you have trouble hearing clearly? \_\_\_\_\_ Seeing clearly? \_\_\_\_\_ Should you wear glasses? \_\_\_\_\_

Do you consider yourself a nervous person? \_\_\_\_\_

If you have any condition which prevents full participation in school activities, explain. \_\_\_\_\_

Is there any question about your health on which you would like information? \_\_\_\_\_

What are your three main desires in life?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

What do you consider the biggest difficulty you have to overcome? \_\_\_\_\_

Do you consider that you have more problems, or a more severe problem, than most people your age? \_\_\_\_\_

Counsellors are given time for private talks with students. Would you like to meet with your counsellor to ask, explain or discuss something privately? \_\_\_\_\_

At the back of this page, write any further information that will help your teacher to understand you.

APPENDIX C

GENERAL QUESTIONNAIRE RE OCCUPATIONAL PREFERENCES

GENERAL WOLFE SCHOOL

1. Name: \_\_\_\_\_

2. Room Number: \_\_\_\_\_

3. Age: \_\_\_\_\_

4. Father's Occupation: \_\_\_\_\_

5. What are your educational plans? (check one only)

Quit at age sixteen. . . . . \_\_\_\_\_

Grade 9. . . . . \_\_\_\_\_

Grade 10 . . . . . \_\_\_\_\_

Grade 11 . . . . . \_\_\_\_\_

Grade 12 . . . . . \_\_\_\_\_

Manitoba Institute of Technology . . . . . \_\_\_\_\_

University . . . . . \_\_\_\_\_

6. Which of the following do you think helped influence your current occupational preference? (check any number)

Television, Movies, Radio. . . . . \_\_\_\_\_

Books, Magazines . . . . . \_\_\_\_\_

Parents. . . . . \_\_\_\_\_

Part-time jobs . . . . . \_\_\_\_\_

School Subjects. . . . . \_\_\_\_\_

Acquaintance with persons on the job . . . . . \_\_\_\_\_

Hobbies. . . . . \_\_\_\_\_

Guidance Classes . . . . . \_\_\_\_\_

Interest Inventory . . . . . \_\_\_\_\_

Other. . . . . \_\_\_\_\_



APPENDIX D

THE WINNIPEG SCHOOL DIVISION NO. 1  
OUTLINE FOR THE STUDY OF AN OCCUPATION

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NATURE OF THE WORK

What is done in a typical day; main activities.  
Activities required from time to time only.  
Tasks usually assigned to new workers.

PAY

Annual earnings (for purposes of comparison with other occupations).  
How earnings are received: salary, hourly wage, fees, commission, profits, etc.  
Pay for a person now entering the occupation.  
Pay given now for a person who entered ten years ago.  
Top pay for this occupation.  
Fringe benefits: pension contributions, health plan, bonuses, employee discounts, special employee facilities.

WORKING CONDITIONS

Sedentary, standing, moving about.  
Independent; in a co-operative team; or highly competitive; under how much discipline from above?  
Steady, or seasonal; lay-offs; especially busy season.  
Hours of work; vacations.  
Hazzards to health or safety; diseases or injuries common among people in this occupation.  
Union or trade or professional organization: fees, benefits, obligations.  
Any practices which seem unethical.

DEMAND

Specific indications of openings now (newspaper advertisements, private information, etc.)  
Likelihood of consistent demand (opinion of a person experienced in the occupation.)  
Anticipated changes in demand as a result of technological developments.

PERSONAL QUALITIES ESPECIALLY DESIRABLE IN THIS OCCUPATION

Age limits  
Physical: sight, hearing, physical strength, stamina, dexterity. Defects that would disqualify a person.  
Estimate of mental capacity (in comparison with that of other related kinds of work.)  
Emotional type: spirited, or cool.  
Initiative, leadership.  
What kind of person is UNlikely to succeed?

TRAINING AND PREPARATION

High school courses: a. required, b. also desirable  
Advanced training: exactly where; nature; cost; time required; bursaries available; earning opportunities.  
Cost of equipment; financing.

OPPORTUNITIES FOR ADVANCEMENT

The chain of promotion; rate of rise.  
Changes in the nature of work with promotion.

ADVANTAGES AND DISADVANTAGES

Special satisfactions in this kind of work.  
Unpleasant aspects.  
Other general comments.

RELATED CAREERS

Careers in the same area requiring more training (Specify).  
Careers in the same area requiring less training (Specify).  
Other careers in the same area with about the same degree of training.

APPENDIX E

SURVEY OF VOCATIONAL GUIDANCE PRACTICES IN  
WINNIPEG JUNIOR HIGH SCHOOLS

NAME OF SCHOOL: \_\_\_\_\_

JUNIOR HIGH ENROLLMENT: \_\_\_\_\_

GRADE 9:

1. How many lessons are spent in teaching occupations? \_\_\_\_\_
2. Who conducts the group guidance classes? (Guidance counselor or classroom teacher) \_\_\_\_\_
3. Check methods used:
  - (a) Group Guidance . . . . . \_\_\_\_\_
  - (b) Counseling time . . . . . \_\_\_\_\_
  - (c) Display Board . . . . . \_\_\_\_\_
  - (d) Pamphlets and Literature . . . . . \_\_\_\_\_
  - (e) Exploring Occupations Workbook . . . . . \_\_\_\_\_
  - (f) Vocational Interest Inventories . . . . . \_\_\_\_\_
  - (g) Films and Filmstrips . . . . . \_\_\_\_\_
  - (h) Guest Speakers or Career Days . . . . . \_\_\_\_\_
  - (i) Field Trips . . . . . \_\_\_\_\_
  - (j) Vocational Aptitude Tests . . . . . \_\_\_\_\_
  - (k) Other devices . . . . . \_\_\_\_\_

GRADES 7 AND 8:

- |   | <u>GRADE 7</u> | <u>GRADE 8</u> |
|---|----------------|----------------|
| 1. How many lessons are spent on vocational guidance? (occupations) . . . . .               | _____          | _____          |
| 2. Who conducts group guidance classes? (Guidance counselor or classroom teacher) . . . . . | _____          | _____          |
| 3. List any specific methods used:  |                |                |
| 1.  | _____          | _____          |
| 2.  | _____          | _____          |
| 3.  | _____          | _____          |

APPENDIX F

DIAGRAMATIC PRESENTATIONS OF TABLES TESTED FOR  
SIGNIFICANCE BY USE OF THE CHI SQUARE TEST

TABLE IX

COMPARISON OF NUMBER OF FIRST-CHOICE PREFERENCES  
ON PRE-COURSE AND POST-COURSE QUESTIONNAIRES

(page 66)

|                      |    |     |     |
|----------------------|----|-----|-----|
| Expected frequencies | 14 | 76  | 90  |
| Observed frequencies | 4  | 86  | 90  |
|                      | 18 | 162 | 180 |

(Yate's Correction used)

|                    |      |
|--------------------|------|
| Degrees of freedom | 1    |
| Chi Square         | 7.63 |
| Probability        | .01  |

TABLE X

COMPARISON OF TOTAL NUMBER OF PREFERENCES ON THE  
PRE-COURSE AND POST-COURSE QUESTIONNAIRES

(page 67)

|                      |    |   |    |     |    |     |
|----------------------|----|---|----|-----|----|-----|
| Expected frequencies | 14 | 4 | 18 | 52  | 2  | 90  |
| Observed frequencies | 4  | 5 | 5  | 68  | 8  | 90  |
|                      | 18 | 9 | 23 | 120 | 10 | 180 |

Degrees of Freedom            4  
Chi Square                        39.69  
Probability                        .01

TABLE XI

COMPARISON OF NUMBER OF STUDENTS INCREASING THEIR NUMBER  
OF PREFERENCES FROM NONE OR ONE TO TWO OR MORE ON  
PRE-COURSE AND POST-COURSE QUESTIONNAIRE

(page 68)

|                      |    |     |     |
|----------------------|----|-----|-----|
| Expected frequencies | 18 | 72  | 90  |
| Observed frequencies | 9  | 81  | 90  |
|                      | 27 | 153 | 180 |

(Yate's Correction used)

|                    |      |
|--------------------|------|
| Degrees of freedom | 1    |
| Chi Square         | 5.01 |
| Probability        | .03  |



TABLE XV

NATURE OF CHANGES IN ALL PREFERENCES AS INDICATED  
ON THE POST-COURSE QUESTIONNAIRE

(page 73)

|                      |    |    |    |    |     |
|----------------------|----|----|----|----|-----|
| Expected frequencies | 13 | 13 | 13 | 13 | 52  |
| Observed frequencies | 5  | 19 | 20 | 8  | 52  |
|                      | 18 | 32 | 33 | 21 | 104 |

Degrees of Freedom            3  
Chi Square                        13.36  
Probability                        .01

TABLE XVI

COMPARISON OF FACTORS CHECKED BY STUDENTS ON THE GENERAL  
QUESTIONNAIRE RE OCCUPATIONAL PREFERENCES AS BEING  
INFLUENTIAL IN THEIR OCCUPATIONAL PREFERENCES

(page 75)

|                      |    |    |    |    |    |    |    |    |    |     |
|----------------------|----|----|----|----|----|----|----|----|----|-----|
| Expected frequencies | 32 | 46 | 35 | 5  | 35 | 28 | 23 | 6  | 12 | 222 |
| Observed frequencies | 22 | 42 | 34 | 7  | 34 | 32 | 19 | 31 | 16 | 237 |
|                      | 54 | 88 | 69 | 12 | 69 | 60 | 42 | 37 | 28 | 459 |

Degrees of Freedom 8

Chi Square 111

Probability .001

TABLE XVII

COMPARISON OF NUMBER OF FIRST-CHOICE PREFERENCES MADE  
BY STUDENTS ACCORDING TO ABILITY GROUPING

(page 77)

|                      |      |    |    |     |
|----------------------|------|----|----|-----|
| Expected frequencies | 24   | 28 | 24 | 76  |
| Observed frequencies | 25   | 35 | 26 | 86  |
|                      | 49   | 63 | 50 | 162 |
| Degrees of Freedom   | 2    |    |    |     |
| Chi Square           | 1.95 |    |    |     |
| Probability          | .4   |    |    |     |

TABLE XVIII

COMPARISON OF TOTAL NUMBER OF PREFERENCES MADE  
BY STUDENTS ACCORDING TO ABILITY GROUPING

(page 79)

|                      |       |     |     |     |
|----------------------|-------|-----|-----|-----|
| Expected frequencies | 66    | 75  | 63  | 204 |
| Observed frequencies | 75    | 103 | 73  | 251 |
|                      | 141   | 178 | 136 | 455 |
| Degrees of freedom   | 2     |     |     |     |
| Chi Square           | 13.26 |     |     |     |
| Probability          | .01   |     |     |     |

TABLE XIX

COMPARISON OF THE NUMBER OF "GLAMOUR" OCCUPATIONS  
 PREFERENCES INDICATED ON THE PRE-COURSE  
 AND POST-COURSE QUESTIONNAIRES

(page 81)

|                         |   |    |   |   |    |   |   |    |
|-------------------------|---|----|---|---|----|---|---|----|
| Expected<br>frequencies | 2 | 15 | 1 | 0 | 7  | 2 | 3 | 30 |
| Observed<br>frequencies | 2 | 8  | 1 | 2 | 5  | 0 | 2 | 20 |
|                         | 4 | 23 | 2 | 2 | 12 | 2 | 5 | 50 |

|                    |      |
|--------------------|------|
| Degrees of Freedom | 6    |
| Chi Square         | 6.17 |
| Probability        | .4   |

TABLE XXI

COMPARISON OF EDUCATIONAL PLANS AS INDICATED ON THE  
 PRE AND POST-COURSE GENERAL QUESTIONNAIRES  
 RE OCCUPATIONAL PREFERENCES

(page 84)

|                      |   |   |   |   |    |    |    |     |
|----------------------|---|---|---|---|----|----|----|-----|
| Expected frequencies | 1 | 1 | 1 | 5 | 30 | 8  | 44 | 90  |
| Observed frequencies | 1 | 0 | 1 | 1 | 27 | 10 | 50 | 90  |
|                      | 2 | 1 | 2 | 6 | 57 | 18 | 94 | 180 |

Degrees of Freedom            6  
 Chi Square                        5.63  
 Probability                        .5