

AN EXPLORATORY INVESTIGATION TOWARD THE DEVELOPMENT OF A
RESEARCH DESIGN FOR A STUDY OF YOUTH WORK TRANSITION

BY

LARRY CHARACH

B.A. (Honors), Simon Fraser University, 1973

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE
IN BUSINESS ADMINISTRATION
in

The Faculty
of

Commerce and Business Administration

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

October, 1977

© Larry Charach, 1977

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study.

I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the Head of my Department or by his representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Commerce

The University of British Columbia
2075 Wesbrook Place
Vancouver, Canada
V6T 1W5

Date Oct 3 / 77

ABSTRACT

In this study a research design for a study of youth work transition is developed and pretested. Available statistics on the scope and severity of youth unemployment are examined and it is concluded that the problems of unemployment are more severe for those under 25 than for any other age group and that the situation is likely to get worse as young people in the next ten years will encounter a situation where ahead of them in the occupational structure are a large number of older, but still young, workers.

It is suggested that the problems faced by youth in the work world could be alleviated if more information were available on what variables determine job success and on what effects various educational and training programs have on youth's work transition. However, such research is a major undertaking and much preliminary work to select effective instruments for measuring work attitudes and for developing effective methods of data gathering is required.

Preliminary work carried out in this study includes determining an optimal sample size, compiling a questionnaire composed of a number of tested attitude scales, and the development of an optimal methodology for using mail questionnaires. A pre-test was carried out and the 24-page questionnaire was sent out to 600 high school leavers. A response rate of 64% was obtained even though time and budget constraints meant only a portion of the mail questionnaire methodology could be used. A multi-variate analysis of the results from the questionnaire showed the attitude

scales had a significant explanatory effect on a number of variables related to job success.

It is hoped that this study will prove useful to future researchers who plan to study the problems of youth work transition and that the excellent response to the pre-test will encourage government to grant the support and commitments such studies deserve.

TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	ii
LIST OF TABLES	vii
LIST OF FIGURES	viii
ACKNOWLEDGEMENTS	ix
DEDICATION	x
PROLOGUE	xi
INTRODUCTION	1

Chapter

1	THE PROBLEM OF YOUTH EMPLOYMENT AND PURPOSE OF THE STUDY	6
	The Current Situation	6
	The Future Situation	15
	The Cost	16
	Summary	18
	The Need for Research	19
	Usefulness of Research Results	20
	Questions to be Investigated by the Proposed Study	21

<u>Chapter</u>		<u>Page</u>
2	LITERATURE REVIEW	23
3	RESEARCH DESIGN	32
	Pitfalls to be Avoided	33
	Population	38
	Choosing the Sample Size	39
	Method of Data Collection	43
4	THE METHODOLOGY FOR MAIL QUESTIONNAIRES	45
	Advantages of Mail Questionnaires	45
	Disadvantages of Mail Questionnaires	46
	Increasing Mail Questionnaire Response Rates	48
	The Covering Letter	48
	Anonymity	50
	The Effect of Questionnaire Length	53
	Type of Postage	55
	Incentives	57
	Followups	59
	Effects of Non-response	67
5	SPECIFIC QUESTIONNAIRE DESIGN AND ANALYTICAL STRATEGY FOR THE PROPOSED STUDY	76
	Introduction	76
	Questionnaire Design	76
	Job Satisfaction	78
	Job Involvement	78
	Work Attitudes	79
	Self-esteem	80
	Analysis of Data	81

<u>Chapter</u>		<u>Page</u>
6	AN EXPLORATORY INVESTIGATION USING THE METHODOLOGY	85
	Introduction	85
	Testing the Mail Questionnaire Methodology	85
	Introduction	85
	The Situation	87
	The Covering Letter	87
	Followups	88
	Weaknesses in the Research Design	88
	The Results	89
	The Use of Computers with Mail Questionnaires	89
	Conclusion	90
	Summary of Exploratory Findings	90
	Introduction	90
	Multivariate Analysis	91
	CONCLUSIONS AND RECOMMENDATIONS	95
	REFERENCES	96
	APPENDICES	101
I	Covering Letter Sent with Questionnaire	102
II	Attachment to Questionnaire	103
III	Followup Letter Sent to Non-respondents	104
IV	Questionnaire	105
V	Summary Tables for Multiple Regression Analysis	117

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Unemployment Rates, by Age and Sex Canada, 1966 and 1975	2
2	Percentage Distribution of Labour Force and Unemployed Canada, 1966 and 1975	7
3	Canada: Selected Labour Force Series, 14-24 Year Olds, 1953-75.	8
4	Selected Unemployment Series for British Columbia, 1966-75	9
5	Index of Unemployment Severity, Selected Age-Sex Groups, 1966-73	13
6	Percentage of College Graduates and Dropouts Among Respondents to Each Success State of Prodding	36
7	Sample Size for Population of 20,000 Number of Subgroups	42
8	Questionnaire Returns by Mailer Type	57
9.	Percentage of Respodents to Each Stage of Prodding Whose Replies Were Found Discrepant	66

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Canada: Ratio of youth unemployment rate to adult unemployment rate, 1969-74	10
2	Canada: Live births, 1945-75 (both sexes)	10

ACKNOWLEDGEMENTS

I would like to acknowledge the support given to me by my thesis committee; Dr. L. Moore (Chairman), Dr. M. Ace and Dr. D. Rusnell. In addition, Dr. Moore's suggestions and encouragement during the preliminary stages of my thesis were invaluable. Special thanks to my friends Elsie Jang, Marvin Enkin, and Barry and Janice Stevenson for their concern and interest throughout my Thesis research and report writing.

This study was supported by funds from the Institute of Industrial Relations at the University of British Columbia and the Educational Research Institute of British Columbia.

x

DEDICATION

to

David Charach

and

Max Shore

"whose quest for knowledge is
reflected in this study"

PROLOGUE

COMMENTS FROM RESPONDENTS TO A STUDY
OF YOUTH WORK TRANSITION

I would like a job working with children. How would I go about finishing my education because I always wanted to be P.E. teacher for elementer (sic) school. I love all sports. I which (sic) I had finish sec. high school now.

Male, Dropout, Employed, 19

Can you help me? I would like to see more nightsschool facilities for all levels of University. I would love to go back but cannot really give up my job and still live comfortably. If it was easier to go back and still hold at least a part-time job I would do it for sure. Money is not too good without university, even if you have a job, they won't pay as well. A degree is like a golden key, they never have to prove themselves as much it seems.

Female, High School Graduate, Employed, 21

In my opinion, the young men that have worked with me in the last 4 years, are too inconsiderate. By inconsiderate I mean they seem not to care if

they stay at the job or not. They don't come to work when they don't want to and just have no interest. People of today don't want to work. In fact I think that some people work for a while just so they can get the unemployment cheques, not many but some, these days even more.

Male, High School Graduate, Employed, 22

You should've elaborated on what type of work. All the jobs I've had have been unenjoyable but necessary. However they have been stepping stones.

Male, Dropout, Employed, 20

I regret not giving an OK on contacting my present employer but they already feel my restless and bored attitude discerning (sic) and any form of questioning would only increase their doubts. I would like to keep the job until February as the hours allow me to attend college mornings. I'm leaving for Europe in February and hope to visit deaf institutes throughout, after which I'll be returning to UBC as a full-time student.

Female, High School Graduate, Employed, 18

I think that school counsellors are *not* worth a thing -- they are never really interested and by the time you are able to see them after several requests it is just not worth it. They don't *CARE*.

Female, High School Graduate, Student, 20

In past years I have known how dissatisfying a job can be. Fortunately this past summer I have had a challenging job which is related to my

interests and education. I hope I answered this questionnaire satisfactorily.

Female, High School Graduate, Employed, 21

I do feel my best teachers and classes I learned the most in were ones where the teachers were very firm (almost strict) and believed in the older methods of teaching. The rest of my teachers left everything up to the student. Kids won't learn (generally speaking) unless they are made to. Kids in school (even to Grade 12), don't know what's best for them and most will try everything to get out of doing too much.

Female, High School Graduate, Employed, 19

Students should be warned on how much value is placed on the college name their education has been derived from. I will not mention the name of the college I attended but the course (sic) was a six month course which cost close to fifteen hundred dollars, the work was hard and time consuming (university graduates even attended the course). Out of 25 girls 15 passed and graduated. Luckily I was one who graduated, there was even a suicide among us girls and I'm sure it was partially due to the pressure from the course (the person in question was 23 and a graduate from UBC). Now when looking for a job the employer is impressed until the name of the college is mentioned.

Female, High School Graduate, Employed, 21

INTRODUCTION

People in the British Columbia labour force under twenty-five years of age suffer an unemployment rate over twice as large as those over the age of twenty-four (Table 1, 1975 figures: 15.1% vs. 5.9%). In the prologue are examples of how British Columbia's youth feel about their experiences in the labour market. The intention of this study is to lay the groundwork for research that will give policy makers the information required to establish programs to substantially reduce the difficulties expressed above. The study will provide evidence of the need for comprehensive research into the problems of youth work transition, and set forth and pre-test a research design for carrying out such research.

While a number of studies have looked at various aspects of youth work transition (see Chapter 3), these studies do not provide sufficient information to allow policy makers to improve the situation. A study by the United Way of Greater Vancouver (Werker and Jones, 1975) demonstrates both the concern with the problems of youth in the labour force, and the need for the comprehensive research design provided in this study.

Table 1
Unemployment Rates, by Age and Sex
Canada, 1966 and 1975

	Both Sexes			Male			Female		
	Total	14-24 yrs	25 yrs & over	Total	14-24 yrs	25 yrs & over	Total	14-24 yrs	25 yrs & over
1966	3.6	6.0	2.9	4.6	7.1	3.2	2.6	4.3	1.7
1973 ¹	7.0	12.5	4.9	6.1	12.5	4.1	8.5	12.4	6.6

¹ Latest 12-month period: January 1974 to December 1975. Source: Seasonally Adjusted Labour Force Statistics, Catalogue 71-201, annual, Statistics Canada.

In 1974, the United Way of Greater Vancouver's Social Policy and Research Committee applied to the National Department of Welfare for a grant to undertake a study on the problems of unemployed youth. Their research design was addressed to the following six relevant issues:

1. The number of young employable people in the Vancouver region.
2. Whether the education young people received in school prepared them for the "work world."
3. Whether labour unions were preventing young people from entering certain careers.
4. The effects of current Canada Manpower and provincial job development programs.
5. The particular problems facing minority groups in general and Native Indians in particular.
6. Whether there has been a change in the work ethic.

This application for grant support brought the response that (Werker and Jones, 1975):

. . . the proposed scope of the study was too broad. . . that most of the six components proposed could be the subject matter of research projects on their own (J. Evariste Theriault's letter, October 24, 1974).

Consequently, the study was re-examined and concentrated on three areas (Werker and Jones, 1975). The researchers undertook a review of the relevant literature and developed an annotated bibliography in the areas relating to youth unemployment. They undertook to document the number and socio-demographic characteristics of young people in the greater Vancouver area receiving welfare or unemployment insurance. Finally they

gathered impressionistic data from interviews with young people seeking employment and informal discussions with counsellors, unemployment insurance officers, youth workers, teachers and union officials.

The importance and relevance of this type of study will be discussed in detail later in Chapter 1. The above discussion supports the need for an investigation into the components of youth unemployment. Both the United Way's and the National Department of Welfare's comments point to the need for research studies that examine youth unemployment. The results from those studies would provide information so that changes could be made in order to improve the experience of young people in the "work world."

The present study is primarily concerned with one of the above components; whether the education young people received in school prepared them for the "work world." It is that component which offers significant possibilities for change.

Werker and Jones (1975) tackled that component to a small extent with their "impressionistic interviews." Discussion with the director and comments in the report (p. ii) indicate that their efforts thus far in this area have been limited because of the cost of a full investigation. Even in their limited study the report states that "(they) often encountered resistance in presenting this perspective" (referring to the perspective of youth to work) and "For this reason the report may suffer from a lack of vividness and intensity in presenting the perspective of youth themselves as they view the perspective of work (p. iii)."

The comments of young people recorded in the Prologue illustrate a study that appears to have a great deal of vividness and intensity.

The purpose of this report is to discuss how that project was done, its methodology and results. As will be discussed in detail the high unemployment and underemployment of youth is a major area of concern to our society. Sound research is required to determine what variables contribute to the problem and in what areas the solution (or solutions) lie.

This paper is composed of four sections:

1. A definition of the problem of youth unemployment.
2. Development of a methodology to obtain valid and useful results.
3. Development of a questionnaire to examine youth work adjustment.
4. Test of the validity of the questionnaire and the effectiveness of the methodology.

The result will be a document that can be used to support the potential benefits from a study on youth work adjustment. The report will demonstrate the extent of the problem and the validity of the research design.

Chapter 1

THE PROBLEM OF YOUTH EMPLOYMENT AND

PURPOSE OF THE STUDY

The Current Situation

People in the labour force under twenty-five years of age suffer an unemployment rate over twice as large as those over the age of twenty-four (Table 1, 1975 figures: 12.5% vs. 5.9%). The over-representation of youth under twenty-five is evident from the fact that while they compose only 27% of the labour force, they account for almost 50% of the unemployed. In British Columbia, the situation is even worse. For instance, the 1975 unemployment rate for youth under 25 was 21% higher than the Canadian rate (15.1% vs. 12.5%; Tables 2 and 3).

Even though the above figures indicate a grave situation, they probably understate the problem. The unemployment figures include only those who meet the dual conditions of actively looking for work and not being employed. That figure does not take into account a potentially large number of people who have not adjusted to the work world.

First of all, as young people experience lack of success in finding work (as reflected in continued high unemployment) and as their share of total unemployment rises (Figures 1 and 2), many youth become

Table 2*

Percentage Distribution of Labour Force and Unemployed
Canada, 1966 and 1975

	1975 ¹		1966	
	Unemployed	Labour Force ← p e r c e n t →	Unemployed	Labour Force
Both Sexes:				
14-24 years	48.6	27.2	40.0	24.3
25 years and over	51.4	72.8	60.3	75.8
Totals	100.0	100.0	100.0	100.0
Male:				
14-24 years	27.2	15.2	28.1	14.3
25 years and over	27.8	48.9	50.6	55.8
Female:				
14-24 years	21.3	12.0	11.9	10.0
25 years and over	23.6	24.8	9.7	20.0
Totals	100.0	100.0	100.0	100.0

* The main message conveyed by Table 2 is that almost 50% of unemployment is accounted for by teenagers and young adults, a group which makes up only 27% of the labour force.

¹ Latest 12-month period: January 1974 to December 1975. Note: Figures may not add to totals because of rounding. Source: Seasonally Adjusted Labour Force Statistics Catalogue 71-201, annual Statistics Canada.

Table 3

Canada: Selected Labour Force Series, 14-24 Year Olds, 1953-75¹

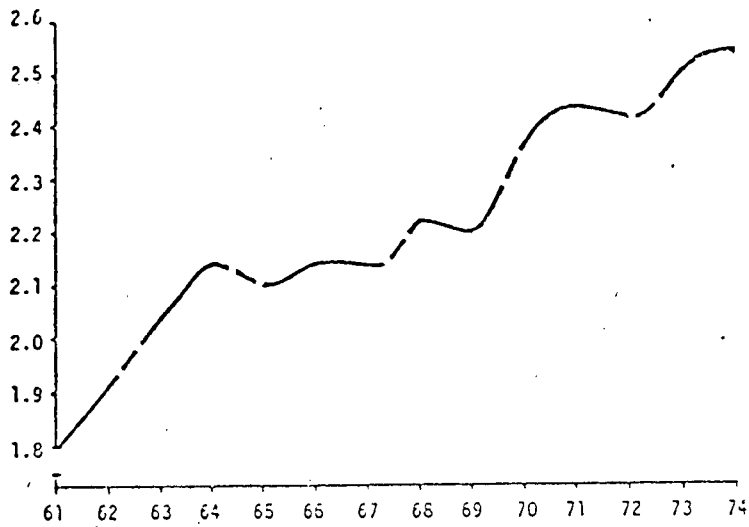
	Working-Age Population		Labour Force		Employed		Unemployed		Unemployment Rate (%)	Participation Rate (%)	Ratio of Youth Unemployment to Adult Unemployment
	(000)	Year-to-Year Change (%)	(000)	Year-to-Year Change (%)	(000)	Year-to-Year Change (%)	(000)	Year-to-Year Change (%)			
1966	3648	+4.9	1797	+7.4	1690	+8.0	107	- 0.9	6.0	49.3	2.1
1967	3826	+4.9	1886	+6.1	1776	+5.1	130	+21.5	6.8	49.8	2.1
1968	3995	+4.4	1998	+4.8	1835	+3.3	163	+25.4	8.2	50.0	2.2
1969	4152	+3.2	2000	+4.1	1914	+4.3	165	+ 1.2	7.9	50.1	2.2
1970	4391	+3.6	2147	+3.2	1924	+0.5	224	+35.8	10.4	49.9	2.4
1971	4433	+3.1	2248	+4.7	1992	+3.5	256	+14.3	11.4	50.7	2.4
1972	4847	+2.6	2383	+4.9	2095	+5.2	263	+ 2.7	11.1	51.9	2.4
1973	4658	+2.4	2518	+6.7	2268	+8.3	251	- 4.6	10.0	54.1	2.5
1974	4783	+2.7	2686	+4.7	2417	+6.6	258	+ 2.8	9.6	55.9	2.5
1975	4905	+2.6	2786	+4.9	2419	+0.1	346	+34.1	12.5	56.4	2.5

¹Source: Labour Force Survey, Cat. No. 71-001.

Table 4
Selected Unemployment Series for British Columbia, 1966-75¹

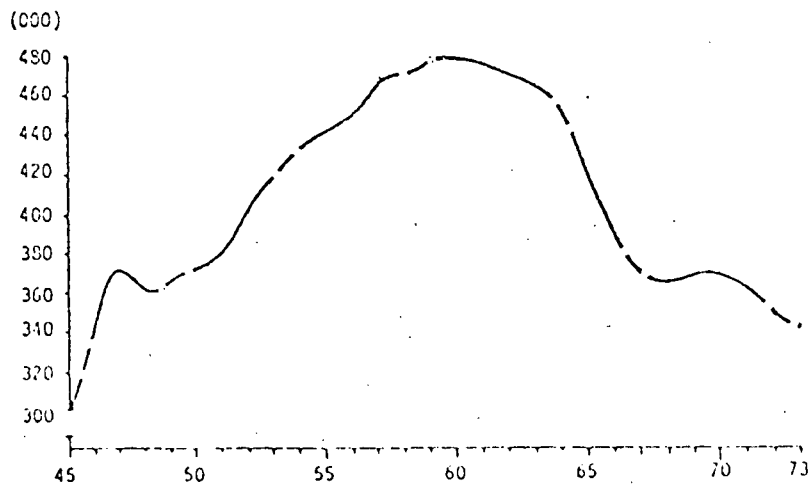
(a) Unemployment Rate of 14-24 Year Olds		(b) Ratio of 14-24 Unemployment Rate to 25+ Unemployment Rate	(c) Ratio of Regional 14-24 Unemployment Rate to Canada 14-24 Unemployment Rate
1966	7.6	2.06	1.27
1967	8.8	2.17	1.28
1968	10.3	2.25	1.26
1969	8.5	2.23	1.07
1970	13.0	2.18	1.25
1971	12.7	2.41	1.11
1972	3.1	2.34	1.17
1973	11.7	2.50	1.18
1974	11.6	2.83	1.19
1975	15.1	2.56	1.20

¹Source: Labour Force Survey, Cat. No. 71-001.



Source: Statistic Canada Labour Force Survey, Cat. No. 71-001

Figure 1. Canada: Ratio of youth unemployment rate to adult unemployment rate, 1969-74.



Source: Vital Statistics Vol. 1, 1973, Statistics Canada, Cat. No. 84-204, p. 46.

Figure 2. Canada: Live births, 1945-75 (both sexes).

"discouraged workers." They quit looking for work and leave the work force entirely. Therefore, the level of youth unemployment is much higher than shown. A recent issue of the Labour Research Bulletin (February, 1975, p. 546) points out that

. . . a discouraged worker effect is now taking place in B.C. In fact, thirteen of the sixteen thousand that have dropped out of the labour force are in the 14-19 age bracket and a further three thousand are in the 20-24 age group. . . . Age group break-downs reveal employment losses in all groups with especially heavy ones in the 14-19 and 20-24 groups, where monthly declines are 13.7 per cent and 7.9 per cent respectively. . . . This large decrease in the labour force aged 14-19 has served to keep the group's unemployment rate down, perhaps to a deceptively low level.

Not only do unemployment statistics ignore the effect of "discouraged workers," but they do not take into account underutilized workers. When a chemical engineer graduate can only find a job as a stock clerk, there is an underutilization of manpower. Similarly, people who work part-time even for a few hours a week are counted as employed, even when they desire full-time work and therefore are really underemployed (Knox, 1976).

The problem of dissatisfied workers is directly related to underutilized workers. The effects of dissatisfied workers can be examined either from the viewpoint of the employer or that of the workers. The cost to the employer is in terms of productivity and quality. For the worker it can result in lower self-esteem and other psychological effects.

While job dissatisfaction is prevalent in all age groups, the available data indicates job dissatisfaction is much more prevalent for under 25's. Burstein *et al.* (1975), in their study of *Canadian Work Values*, state that "this (dissatisfying jobs) was especially true for 15 to 24 year olds (p. 49)."

It is evident that available unemployment statistics provide only a partial picture of the effectiveness of the labour market in utilizing youth. There is a need for a measure of "subemployment" (Vietorisz, Mier and Giblin, 1975) that will include discouraged workers and underutilized workers. However, even without such a scale there is a large amount of evidence that there is a poor match between the current job structure and the abilities, needs and aspirations of today's youth.

As a measure of personal and financial hardship the unemployment rates are a very gross indicator. For instance, in a multi-earner family the loss of a secondary earner would cause less hardship than the loss of employment for the earner in a one-earner family. The Economic Council of Canada argues that it is long-term unemployment that is of interest because of its serious economic and social implications. Accordingly, the ECC has used an index of unemployment severity to take into account that the seriousness of unemployment of the individual may increase with the duration. The index simply multiplies the unemployment rate by the average duration of unemployment. Table 5 provides calculation of the index for the period 1966-1973.

The index clearly shows that the problems of unemployment are much more severe for the under 25 age group. In most cases, their severity indices are twice that of any other group.

Another aspect of the current situation which not only indicates the severity of the problem, but indicates one area where one should investigate solutions (see Chapter 2) is to examine the type of unemployment experienced by youth, i.e. whether the high youth unemployment is because

Table 5
Index of Unemployment Severity,¹ Selected Age-Sex Groups, 1966-73

	All Ages			14-24 years			25-44 years			45 years and over		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Unemployment rate												
1966	3.6	4.0	2.6	6.0	7.1	4.3	2.6	2.9	1.9	3.1	3.7	1.6
1967	4.1	4.6	3.0	6.8	8.1	5.1	3.1	3.6	2.0	3.3	3.9	1.8
1968	4.8	5.5	3.4	8.2	9.7	6.0	3.7	4.2	2.3	3.7	4.4	2.0
1969	4.7	5.2	3.6	7.9	9.4	5.9	3.5	3.8	2.5	3.7	4.2	2.3
1970	5.9	6.6	4.5	10.4	12.4	7.7	4.4	5.0	3.1	4.3	4.9	2.6
1971	6.4	7.0	5.1	11.4	13.3	8.8	4.7	5.2	3.6	4.6	5.3	2.9
1972	6.3	6.8	5.3	11.1	13.0	8.6	4.8	5.0	4.1	4.3	4.8	3.1
1973	5.6	5.9	5.1	10.0	11.2	8.2	4.1	4.2	3.9	3.8	4.1	2.8
Average duration of unemployment²												
1966	10.34	10.52	9.66	9.21	9.28	9.00	9.97	9.89	10.23	12.34	12.55	10.90
1967	10.33	10.54	9.56	9.17	9.20	9.13	10.14	10.22	9.76	12.42	12.66	10.91
1968	11.35	11.60	10.44	10.31	10.46	10.00	11.26	11.44	10.18	13.21	13.30	12.32
1969	11.76	12.07	10.80	10.55	10.94	9.78	11.69	11.53	11.81	14.07	14.81	12.86
1970	12.26	12.53	11.38	11.15	11.45	10.42	12.32	12.34	12.08	14.42	14.50	14.00
1971	13.64	13.85	13.05	12.73	12.91	12.38	13.78	13.78	13.52	15.33	15.59	14.12
1972	13.19	13.45	12.51	12.01	12.18	11.62	13.54	13.61	13.39	15.33	15.74	13.89
1973	12.74	12.91	12.39	11.58	11.69	11.37	13.18	13.16	13.27	14.85	15.01	14.25
Index of severity³												
1966	0.37	0.42	0.25	0.54	0.66	0.39	0.26	0.29	0.19	0.38	0.46	0.17
1967	0.42	0.48	0.29	0.62	0.74	0.47	0.31	0.37	0.20	0.41	0.49	0.20
1968	0.54	0.64	0.36	0.85	1.01	0.60	0.42	0.48	0.23	0.49	0.59	0.25
1969	0.55	0.63	0.39	0.83	1.03	0.58	0.41	0.44	0.30	0.52	0.60	0.30
1970	0.72	0.83	0.51	1.16	1.42	0.80	0.54	0.62	0.37	0.62	0.71	0.36
1971	0.87	0.97	0.67	1.45	1.72	1.09	0.65	0.72	0.49	0.71	0.83	0.41
1972	0.83	0.91	0.66	1.33	1.58	1.00	0.65	0.68	0.55	0.66	0.76	0.43
1973	0.71	0.76	0.63	1.16	1.31	0.93	0.54	0.55	0.52	0.56	0.62	0.40

¹ Unemployment rate multiplied by average duration of unemployment.

² Average number of weeks per unemployed person.

³ Average number of weeks per person in labour force.

SOURCE: Based on data from Statistics Canada.

SOURCE: *People and Jobs*, Economic Council of Canada, 1976, p. 209.

of overall deficiencies in aggregate demand or because young people are not willing or able to fill the jobs that do exist. Canada Manpower studies have found the latter to be the case.

Among these Departmental studies, for example, one researcher (Knowles, 1973) found that:

The preponderance of short term unemployment implies an active market where the central problem appears to be job-matching and job instability as opposed to demand deficiency.

and

. . . changes in employment conditions account for a relatively small proportion of the changes in the teenage unemployment rate.

The problem of job-matching, which is reflected in the high turnover of under 25's (Economic Council of Canada, 1976, p. 90), can be explained by the fact that many young people enter the world of work with limited knowledge of how their education is related to job opportunities. This problem is especially acute for those youth seeking blue-collar jobs, as education is primarily oriented towards white-collar jobs.

A Canada Manpower study by Li (1975) estimates that factors related to job turnover and job matching in 1974 account for 63 per cent of the unemployment rate experienced by teenage males. These figures and both Li's and Knowles' finding that this component of unemployment is particularly prevalent for youth unemployment indicate that high youth unemployment is not something that will vanish when the economy improves. The problem is an inherent part of our economic and social structure.

The Future Situation

The above discussion shows there is a major problem in youth work transition as shown by high rates of unemployment and underemployment in youth categories. As stated earlier, this problem will not be alleviated solely by growth in our economy. Rather, it will require positive measures by various government agencies. It is possible some policy makers may feel that the problem is a result of the 'baby boom' of the late 1940's and 1950's, and as the youth population declines in the 1980's (see Figure 2), the youth unemployment problem will not be of the current severity and will no longer be of serious public concern.

The falsity of that belief and the implications for the future are well presented by the Research Projects Group of Canada Manpower (1976) in their study, *Youth Unemployment in Canada: A Detailed Analysis*. They stated:

This belief is extremely naive because it does not take into account factors other than demographic pressure which caused the gap to exist in the first place, to widen in the last 10 years, and which will likely work against a closing of the gap in the next 10 years.

Their statement is strongly supported by demographic projections for the labour force. Even though the population of 14-24 year-olds will be some 150,000 smaller in 1985, the youth labour force will be 169,000 (6 per cent) larger. In addition, while the 14-19 year-old labour force will probably peak at the same time as their population (1978), the 20-24 year-old labour force will likely show continued growth over nearly all of the next ten years.

Thus, the increasing magnitude of future youth unemployment is supported not only by a projected increase in labour force participation,

but also by the projected changing age-composition of the population. As youth enter the labour force in the next ten years, they will encounter the situation, where ahead of them in the occupational structure is a large number of older, but still young, workers. However, these workers will have the competitive advantage of experience. This will mean young people might be left with the role of "marginal" workers with increased problems of unemployment and job dissatisfaction.

The evidence strongly indicates that given the current economic and social structure that youth will continue to suffer high unemployment for at least the next 10 years. However, the root causes will be the same as briefly discussed previously. The problem will not be due to a lack of jobs, but a lack of suitable jobs or a lack of suitable training.

The Cost

What is the cost of the above situation? Direct costs include the payment of welfare and unemployment insurance to youth to under 25's. In individual terms the costs are largely psychological, for instance low self-esteem that can accrue from failure to find employment.

No one has successfully attempted to determine the cost of high youth unemployment, but needless to say, it is substantial. For instance, a report on youth and social assistance (Canada Council of Social Development, 1972) reported that welfare payments to under 25's were increasing much faster than either their population growth or any other age group. In Toronto, social assistance cases climbed by 22 per cent between September, 1970, and September 1971. Within this group youth between 16 and 24 increased by 94% representing 44% of the entire increase.

We also find that youth under 25 constitutes over one-third of all UIC claimants (1974: 33.8%).¹ Breaking this figure down further in 1974 they constituted 49.5 per cent of all claimants with less than twenty insurable weeks and 27.8 per cent of claimants with twenty insurable weeks or more. This is consistent with the earlier findings that those under 25 are characterized by shorter attachments to the labour force than those 25 and over.

Two major facts emerge from this information on UIC claims. First of all, there would be a major effect on UIC claims if youth unemployment was reduced. Secondly, the shorter attachment of youth to the labour force means they are primarily affected by any changes in UIC eligibility requirements.

Some people believe that young people compose a large number of social assistance and unemployment insurance recipients because they are lazy and do not want to work. If that were true, then we could not consider a high portion of the cost of social assistance or unemployment insurance being a result of high youth unemployment. However, the *Right to Opportunity* study found that 93% of the recipients rejected social assistance as a way of life and that 87% per cent had tried other alternatives before applying for social assistance. In addition, it is probable that some youth has lost their motivation to work as a result of poor success in the job market. This latter point is partly supported by a U.S. study (Goodwin, 1972) which found that poor people attributed little

¹The information on unemployment insurance claimants was obtained with the assistance of Dr. Steven M. Hills, Faculty of Commerce and Business Administration, The University of British Columbia. Similar data is reported by the Economic Council of Canada (1976), p. 153.

self importance to work as a result of their having continually failed in the world of work.

Yet, if steps are to be taken to reduce the extent of youth unemployment, there is a need to have information available to evaluate the potential benefits from any step. This includes the intangibles of higher self-esteem as well as the tangibles, such as lower unemployment insurance and social assistance payouts.

Summary

An examination of the situation of youth in the world of work found high unemployment and dissatisfaction with the available type of work. This situation is not solely due to overall deficiencies in aggregate demand. A large part of the unemployment is due to a mismatch of available jobs with available skills. Unless that mismatch is reduced the degree of youth unemployment will not fall in the future even though their proportion in the population falls. Instead, it likely will rise as the current large number of employable youth get established in jobs and more women enter the work force.

While the cost of this problem cannot be determined with available data, it is very large. It includes transfer payments, such as unemployment insurance and social assistance, in addition to psychological effects on those unable to find satisfactory jobs.

The purpose of this study is to develop and pre-test a methodology to determine the causes and costs of the problem. That information will allow policy makers to take positive steps to alleviate the problem. In addition, information on the nature of the world of work will allow

students and their counsellors to make decisions about their training so they will enter the world of work prepared and aware.

The Need for Research

The previous discussion makes it evident that within youth categories there is a serious problem of high unemployment and poor work adjustment. While there is evidence that the cause is a lack of suitable jobs, that in itself is a cursory answer. Information is still needed on what are suitable jobs for youth. This must be answered from both the standpoint of youth's needs and skill requirements of employers.

Do the problems of young people in the world of work result from our educational system not meeting the skill requirements of employers, as well as not adapting to the abilities of the individual? Does our educational system not prepare youth for the jobs they will find available? Many knowledgeable people in the field of education and labour answer these questions in the affirmative (Ginzberg, 1972; Wirtz, 1968; Hodgson, 1972; Davenport, 1972). Similarly, some follow-up studies have found that working adults attribute much of their problems in finding satisfactory jobs to inappropriate curricula and inadequate educational and vocational guidance (Flanagan and Russ-Eft, 1975).

Information is needed as to what extent the above problem is true for youth in British Columbia and Canada. It is also important to find out what effects various education programs and courses will have on youth transition from school to work.

Thus, it is necessary to study what affects work adjustment of youth, the problems and effects of this work adjustment and how the transition from school to work can be improved.

Usefulness of Research Results

The study will provide useful information to educators, Government (Department of Manpower and Immigration, B.C. Department of Education), and youth themselves. It will provide educators with an indicator of how important their influence is on the future adjustment of youth. The importance of this is apparent from the findings of a study on Vancouver education needs (Educational Research Institute of B.C., 1975) where the public and students ranked the educational goal of developing one's career or personal interest through further training and education as being the seventh and sixth most important goals respectively. In contrast, the Teachers and School Administrators ranked that goal twenty-third and twenty-seventh respectively. There is a question of whether the public and students overvalue the role of education in preparing youth for work, or teachers and administrators undervalue it. The B.C. attitude is an interesting contrast to the United States situation where 45 states have as one of their educational goals that each individual must prepare for a career (Flanagan and Russ-Eft, 1975).

Information on the nature and problems of youth unemployment and details on what characteristics influence job success will aid school and manpower counsellors. It would also be used in the formation of courses that will prepare youth for work.

Similarly, the information will aid Canada Manpower and Provincial Departments of Labour in determining problem priorities and needs. For instance, what emphasis should be given to academic versus technical programs, or what training programs should be supported.

For instance, in Vancouver, Canada Manpower and the local school board recently set up the Career Action Youth (CAY) Centre whose objectives include aiding in the preparation for eventual employment and obtaining realistic career goals and attached. Not only will the proposed study aid the CAY centre in meeting that goal, it will also indicate what other steps are required to meet that goal. The study may find that vocational preparation in school is a major factor in job success. If so, there are a number of steps that could be taken to implement it.

Questions to be Investigated by the Proposed Study

The proposed research will examine the following questions related to youth employment. Specific variables used are discussed in Chapter 3.

1. Which young people are successful in the world of work?
 - this will include job satisfaction, job search activity since leaving school and job characteristics.
2. Which personal characteristics, if any, differentiate youth successful in the work world from those who are not?
 - this will include family background and other demographic data
3. What is the relationship between work attitude with job success?

4. How well did the educational system prepare youth for work?
 - this will be looked at both from the standpoint of youth with respect to their course content and vocational guidance, and from the employer's requirements.

The purpose of this study is not to answer those questions, but to provide a research design so they can be answered. In Chapter 2, a number of studies and reports that identify some of the problems young people face in the work force are reviewed. Also, in that chapter, studies that have gathered data on youth's work experience are examined to determine what components of their research design might be included in the proposed study.

In the remaining chapters a research design is developed after investigating some of the pitfalls to be avoided in this type of study (Chapter 3). A key component of the research design is the development of a methodology for obtaining a high response rate to mail questionnaires (Chapter 4). Using portions of this methodology with a questionnaire developed for the proposed study (Chapter 5) the recommended research design is tested on a sample of over 600 high school graduates and dropouts (Chapter 6) and recommendations are for more use of the research design.

The result of this study will be a tested and validated research design, including a comprehensive questionnaire, for the study of the problems faced by youth in the world of work.

Chapter 2

LITERATURE REVIEW

A number of studies done in both Canada and the United States were very valuable in designing the study, in identifying some of the problems of youth work adjustment, and in providing a potential source of data for cross-cultural comparisons of Canadian and American Youth.

The paper, *Youth Unemployment in Canada: A Detailed Analysis* (Department of Manpower and Immigration, 1976) provides a wealth of macro-economic data that are invaluable in any study of youth unemployment. It begins with an historical perspective of youth unemployment including an analysis of recent youth labour force and unemployment trends. It then examines the extent to which the school system prepares youth for the labour market. A review is made of youth's participation in employer-sponsored training and in Department of Manpower's programs. Finally, projections are made of the future youth labour market situation.

The major findings and conclusions of this study have been reviewed in Chapter 1. One finding that is particularly relevant to the present study is that schooling is the key factor in youth's high unemployment and turnover. As stated in the report:

High turnover is most marked among teenagers whose relative lack of experience and training and shortage of experience relegates them almost inevitably to the least desirable occupations, recurrent unemployment and, little hope for future advancement. (p. ii)

The report follows with the conclusion that young people get inadequate help in school to prepare them for entry into the labour market. The researchers found this true both in terms of vocational training and vocational counselling.

A United States nationwide study of youth, *Project Talent* (Flanagan and Cooley, 1966) is certainly the most ambitious longitudinal study of youth to date. Based on the classical trait-and-factor approach, it tested a stratified random sample composed of 400,000 secondary students in 1960 and followed them up one, five and eleven years after completing high school. An additional followup is to begin in 1980, twenty years after the graduation of the first class. The project had four main goals: (1) to develop an inventory of human resources, (2) to develop a set of standards for educational-psychological measurement, (3) to prepare a comprehensive counselling guide indicating the patterns of aptitude and ability which are predictive of success and satisfaction in various careers, and (4) to provide a better understanding of the educational experiences which prepare students for their life work.

The results of the study have been made available in a series of reports. Some of the findings are particularly relevant to our examination of youth work transition. For instance, 44% of the students reported that at least 50% of the time, "I feel that I am taking courses that will not help me much in an occupation after I leave school." That finding

demonstrates the inadequacy of the curriculum in meeting the students' perceived needs.

However, even though *Project Talent* has been of great value to educators, it only looked at what students have learned, and did not investigate how useful their learning has been in achieving their objectives.

A recent study that followed up a random stratified sample of *Project Talent* participants (Flanagan and Russ-Eft, 1975) looked at how the subjects' education contributed or detracted from their quality of life." This study is useful as a guide to the effect of various parts of the school curriculum on job success. Two of the study's findings are extremely relevant to the present investigation. First, over 86% of the males and 66% of the females stated that inadequate vocational and educational guidance inhibited their personal development. Their lack of knowledge about how their personal interests, values and abilities prepared them for work resulted in wasted time, personal frustration and lack of motivation when looking for and adjusting to an suitable career.

The other area of concern that emerged from that study is that 64% of males and 78% of the females felt they would have benefited from specific additional courses. The courses indicated included business education for women, and technical courses for the men. The problem of inappropriate curricula is due to some degree to differing priorities between the educators and the students.

The conclusion of the report gives an important reason why a study should be undertaken to examine how school prepares youth for work.

There are, however, some areas in which education could contribute in added ways to the lives of these people. . . . the data on occupational expectations

and outcomes indicated a need for some additional programs in the schools. Only about 15% of the men are in one of the career groups they chose as 15-year-olds. About 19% of the women are in the same career group that they expected in 1960. . . . it should be noted that a large percentage of these people now report that, as a teenager, they understood the educational requirements of a job and their own abilities and interests 'only slightly well' or 'not well at all.' Improved programs in the schools would have enabled those students to formulate more realistic goals for their future occupations. (p. 59)

The desire to have more vocational related education is also found in the "Vancouver Educational Needs Assessment Study" (Educational Research of British Columbia, 1975). The study reported on the assessment by four groups of the importance of various educational goals. The groups were the students, the community at large, educational administrators, and teachers.

Of particular interest is that while the students and the general community ranked the need for students to have the skills, knowledge and attitude necessary to develop one's career and interests as the sixth and seventh most important need, the teachers and administrators rated it twenty-third and twenty-seventh respectively. When the researchers investigated the reason for this disparity they found that the teachers interviewed believed that education should be subject-oriented rather than career oriented. A problem may occur when that attitude results in the exclusion of any career orientation in courses or programs. That this may indeed be the situation is indicated by the fact that the students interviewed were unanimous in their conviction that students do not get much help in school in clarifying their career needs. The study does not resolve the question of whether the public and students overvalue the role of

education in preparing youth for work or whether those in the school system undervalue its importance.

"Obstacles to the Employment of Youth" (Werker and Jones, 1975), was discussed earlier. It was useful to this study as it gave an overview of youth unemployment in British Columbia. The researchers recognized and identified the need for an examination of the difficulties youth find in their transition from school to work. While they did not attempt to determine the causes or find the solutions to youth unemployment, they did endeavor to identify the extent of the problem. They reviewed the literature in areas related to youth unemployment, and attempted to document the number and socio-demographic profile of youths receiving welfare and unemployment insurance, and to gather impressionistic data based on interviews. Their presentation of statistics on youth unemployment and especially their inclusion of an annotated bibliography provides a useful reference to researchers in this field. As well, an inventory of services available to youth in the Greater Vancouver area provided as an appendix to the report is useful as an indicator of what was being done to alleviate the problem of youth unemployment.

The researchers were unable to obtain unemployment statistics in sufficient detail to allow any conclusions. Chapter 1 of the present study does have detailed breakdowns. The data was obtained from sources possibly not available at the time of Werker and Jones (1975) study.

The researchers also did not fully meet their goal in gathering impressionistic data. As was discussed above, that area of their study suffered from a "lack of vividness." Again, that problem has been overcome in the present study as indicated by the comments of young people in the Prologue.

Despite the above two problems the "Obstacles to the Employment of Youth" provides an useful reference guide to researchers of youth unemployment.

A study that was particularly useful both as a source of attitude scales and as supporting evidence towards the validity of this proposal was done by the University of Minnesota's Industrial Relations Center. The study, "Youth Unemployment: Frictions in the Threshold of the Work Career - An Exploratory Probe" (Heneman and Dawis, 1968) measured thirty dimensions of work attitudes. This Youth Opinion Questionnaire (described by Graen and Dawis, 1966) was first pre-tested and refined using a sample of 5,000 high school students. It was then used to produce normative data on a stratified random sample of over 9,000 students in Grades 9 through 12. In the final stage, graduates and dropouts from the school providing normative data were followed up. A highly-structured interview covering work experience, job satisfaction, self-evaluation and biographic data were completed on 183 graduates and 90 dropouts.

A number of their results and conclusions were particularly noteworthy. They developed reliable scales to measure work attitudes of threshold workers, and found that:

1. Variance in the work experience of threshold workers which are not explained by demographic and biographic variables, are accounted for by measured work attitudes.
2. The basic underlying attitude dimension of ego-strength was a possible explanation for the different success rates enjoyed by the graduates and dropouts in their beginning work experience. The data suggested that the dropouts were inferior to graduates on this dimension.
3. A significant relationship can be found between measured work attitudes and beginning employment experiences.

As the report stated, these findings are of an exploratory and tentative nature because of the small size and unknown representativeness of the co-operating group of dropouts and graduates. If the findings could be validated for a representative sample of B.C. threshold workers they might have some important implications to B.C. educators. For instance, if lower self-esteem of dropouts affect their work experience, it is possible that by offering an option other than Grade 12 graduation the dysfunctional affects of dropping out discussed below could be reduced.

The Institute of Survey Research conducted a longitudinal study of over 2,500 students (Bachman, 1967; Bachman *et al.*, 1972; Davidson, 1972) which focused on major changes in adolescent boys during the high school years and how these changes are affected by aspects of the immediate social environment.

Some of their findings on the relationship between education and smooth transition from school to work are interesting. One part of the project (Bachman *et al.*, 1972) looked at differences between high school graduates and dropouts in the work world. The findings showed that, while high school students have a higher employment rate than dropouts, there is no difference when socio-economic status and intelligence is controlled for. They also found no significant difference in job satisfaction and earnings. The authors questioned whether the "anti-dropout" campaigns results in a self-fulfilling prophecy. The report indicates that emphasizing twelve years of education as the status quo may be incorrect. This is one area that the proposed research will examine closely.

The above studies support the need for the major research which this study proposes. For example, the Dept. of Manpower and Immigration (1976) presented macro-economic data that indicated that education, especially

vocational counselling and training, had a major impact on the job success of young people. That viewpoint was also expressed in Flanagan and Cooley's (1966) longitudinal study of youth which found that a large proportion of students felt their courses would not help them much in an occupation. A followup of that study (Flanagan and Russ-Eft, 1975) found that over 80% of the males and 65% of the females surveyed ten years after leaving high school felt inadequate vocational and personal guidance inhibited their personal growth. These studies all discuss the problems faced by young people in making the transition from school to work, and indicate that school inadequately prepares youth for work.

The above studies also indicated some questions that need investigating and provided tested attitude scales that could be used. Werker and Jones (1975) attempted to determine the costs of youth unemployment in terms of their demands on unemployment insurance and social welfare, but were unable to obtain sufficient data. This study has identified data sources that could be used to obtain that information. Bachman *et al.* identified the importance of examining the relationship between the amount of education and job success. The proposed study will examine this detail, as well as how the type of education and vocational counselling affects job success. The importance of work attitudes in explaining job success was shown by Heneman and Dawes (1968). They also provided validated scales to measure a number of work attitudes. By using the information obtained in the above studies, the research design of the proposed study is comprehensive and will require a minimum amount of validation.

While the above studies provided some important insights into the problems youth face in the transition from school to work, they have presented very few conclusive findings. For example, Heneman and Dawes' (1968) research was of an exploratory and tentative nature. Also, it is questionable whether the above findings can be generalized to apply to British Columbia with its own particular economic structure (i.e. resource based industry and Public School System). Finally, a number of changes have occurred in attitudes towards work since many of the above studies have taken place.

For those reasons the proposed research is of major significance. As well, our emphasis on youth who are now out of school is a relevant contribution when considering that the University of Minnesota study only followed up 183 of the 18,000 high school students in their original sample and that Project Talent's interest in working youth was mainly in what jobs they held, and in their future career plans rather than in job search activity and job satisfaction.

Chapter 3

RESEARCH DESIGN

It is important that the results of the proposed study are accepted with confidence if it is to have a major impact on planning and decisions made about programs related to youth in the labour market. For that reason, a review was made of the factors influencing sample size, and the sampling design will consider those factors. Similarly, the method of data collection was developed after a thorough review of the literature on the subject.

The questionnaire is an important influence on validity of the results. Therefore, all attitude scales used must be chosen from those that have substantiated validity, and care must be taken to avoid biases because of question content or wording.

A major part of this paper is the pretest of the research design with particular emphasis being placed on the methods of data collection and the validity of the scales used. Because of the potential importance of the proposed study, the pretest (while exploratory) was done on a large scale and in many ways represents a major study in itself. Its main constraint is that, because of time and budget limitations, it was not concerned with developing any conclusions related to the area of

investigations, rather emphasis is placed on the effectiveness of the method in eliciting useful responses.

Pitfalls to be Avoided

In designing a study, care must be taken to ensure that the results obtained are valid. This particularly applies to the sampling design, and methods of data collection. An excellent example of common errors made in studies based on data collection by interview or survey is provided in a major study done in British Columbia in the *Impact of Community Colleges* (Dennison, Tunner, Jones and Forrester (1975)). The overall study took over three years and cost in excess of \$250,000. Yet it had major weaknesses in the methodology that may have biased the results. A detailed critique of this study is useful as it will bring out the major problems in sampling design and survey techniques. The *Impact Study* is especially worth examining as it was based on a similar population to that examined in the proposed study.

The *Impact Study* is based on sixteen studies done over a four year period. The method of data collection used most extensively was that of surveys by questionnaire.

The *Impact Study* examined three broad impact areas; the student, the educational system and the community (p. 8). Surveys of the student were for the most part done on the entire population. The report states, "the response rates were generally very good, with about 60% of the students completing the surveys. . . ." The report continues:

With response rates so high, the question of whether a study is 'random' becomes rather academic. In addition, practically all observed differences in the results of

the survey are statistically significant since such a high percentage of the population has been measured. Thus the main problem is one of interpreting the findings. (p. 144)

The purpose of scientific sampling is to ensure that the sample being studied has the same characteristics as the population that it is taken from. The report's reference to a high response rate refers to the large number of respondents. Typically there were over 10,000 respondents to each survey conducted. For each of the Grade 12 surveys the response was close to 20,000. Unfortunately they have committed the classic error of self-selection that is well documented in the literature on survey research.

Perhaps the best example (Hansen *et al.*, 1953, pp. 68-71) occurred in 1937 when a "census of unemployment" was authorized by the United States Congress. The provisions for the census specified that it should be a voluntary registration, and the method of carrying it out was through a mail questionnaire. A nation-wide publicity campaign attempted to achieve full co-operation, and the President appealed to all unemployed and partially unemployed to respond. The post office then left a form at every door in the United States that received postal service.

The technicians responsible for the 'census' were aware of the difficulties in interpreting voluntary survey results and undertook, immediately after the mail canvass, to take a scientific sample of the population and cover it completely with an enumerative survey in order to provide a basis for evaluating the validity of the much more widespread mail returns.

As a result of the tremendous campaign, the survey achieved a very high response. Based on the check sample, 67 per cent of those who

should have responded actually did. The mail survey in this instance was tremendous in size, with more than 11,000,000 responses. Still, the check sample showed that this 67 per cent who responded were an unrepresentative sample of the unemployed and partially unemployed population. It showed that the summary figures from the mail survey were substantially biased and had errors that were many times as large as the possible sampling errors of a reasonably well-designed sample that would be only a small fraction of this size. In fact, the check survey which covered only 2% of the population was done at a fraction of the cost of carrying out and evaluating the large survey and it not only gave results of greater precision but in addition the precision could be objectively evaluated.

As the above example illustrate, the *Impact Study's* main problem was not "one of interpreting the findings," but of determining the potential biases of the findings.

The importance of a high response rate depends on the group being studied. When the group is a student population a response rate of even 70% is not always high enough to preclude self-selection bias. Other researchers have found conclusively that those with higher education and intelligence are more likely to respond to voluntary surveys. Eckland's (1967) study where he achieved a 94% response rate from 1255 former college students is one example. As Table 6 illustrates, dropouts required the most prodding to respond to the survey. It is important to note, however, that the dropouts did respond when prodded sufficiently. If Eckland had been satisfied with a 67% response rate then university dropouts would have composed 23.4% of the sample rather than their true representation of probably over 30%. The implication for the *Impact Study* is that the

respondents to the survey would probably represent the more educationally oriented students who would be most likely to achieve a university degree or college diploma. Macek and Miles' (1975) study in IQ score and response rate, which found that respondents had a significantly higher IQ than non-respondents (101.73 vs. 91.52) also indicates that the *Impact Study* may have been biased in favor of higher education.

Table 6
Percentage of College Graduates and Dropouts Among Respondents
to Each Successive Stage of Prodding

Graduate Statue	First Wave (n=510)	Second and Third Waves (n = 334)	Telephone or Certified (n = 268)	Telepone and Certified (n = 68)	All Returns (n=1,180)
University Graduate	63.1	50.0	35.8	23.5	50.9
Transfer Graduate	17.8	19.8	18.3	11.8	18.1
Dropout	19.0	30.2	45.9	64.7	30.9
TOTAL	99.9	100.0	100.0	100.0	99.9
Cumulative Response Rate	40.6	67.0	90.2	94.0	--

SOURCE: "Effects of Prodding to Increasing Mail-Back Returns," Bruce Eckland, *Journal of Applied Psychology*, 1965, Vol. 49, No. 3, 165-169.

The liklihood that the results were biased because of an unrepresentative sample is particularly true for the portion of the *Impact Study* based on mail surveys of the community (Chapter 10). Samples were taken of 1% of all households in the City of Vancouver and of 1,500 members of the Board of Trade. The response rates in both cases were extremely low; 13.6% and 20% respectively. Donald's (1960) investigation

of 'The Implication on Nonresponse for the Interpretation of Mail Questionnaire Data' found that "The less complete the data are, the more likely that they are biased in favor of that section of the sample more actively involved in the subject matter under consideration and more likely to give favorable results (p. 122)."

The above statement applies also to the *Impact Study* student surveys. The Grade 12 surveys, which were all completed in the classroom, would be biased by incomplete data in two ways. First of all, those not present for the surveys would by definition include students with poor attendance at high school. Secondly, the poorer and less interested students could be more likely to fill in the 'optical-mark' computer cards incorrectly or spuriously. This, in addition to the previous discussion, indicates that the student surveys would be biased in favor of higher education.

This critique indicates areas of concern about the validity of the *Impact Study*. Further analyses of the differences between the respondents and nonrespondents are indicated. As stated previously (Charach, 1976), "In all cases it is worthwhile for researchers to compare respondents with nonrespondents in order to determine likely areas of bias. . . . As well, an intensive effort should be made to contact some of the nonrespondents. . .to find out the reason for nonresponse and to receive supplementary data for comparison with respondents." The *Impact Study*, while providing much useful information in some areas, should be used warily as the data are based solely on surveys.

The research design for a study on youth work transition was developed with these pitfalls in mind. For example, one objective of the study will be to obtain a high response rate of sample subjects.

Population

While the study is structured around the problems of youth under 25 in the labour force, its goals can best be met by looking at a population that is a subset of that population. The population to be studied is that group of individuals, who left the B.C. Public School System one year and three years ago (1971 and 1973). These years were selected in order to provide a look at the transition period from school to work, as well as allowing a period of "adjustment to work" for the population in order to make the attitude measure of Job Satisfaction and Job Attraction stable indicators.

The population choice was also influenced by the findings of Blau and Duncan (1967) and Ginzberg (1966) that the path of one's career development is affected by the individual's previous history, with the conditions influencing the beginning of career development having a diminishing effect the further a person moves away from that starting point. A significant implication from their results is that in order to account for the progression of one's career considerable attention must be paid to the circumstances and *institutions* that provide the contingencies for subsequent career development (Breton, 1972). Among the institutions that influence youth's career development the public school system is of primary importance for two reasons. First of all, because in our social system it has become the main allocation agency for the occupational and stratification system (Breton, 1972). Additionally, it is possible to change the public school system through the action of government agencies, professional associations, educators and students.

Choosing the Sample Size

In each of the years chosen there were over 20,000 school leavers. The cost of reaching the entire population is both quite high and unnecessary. A more valid sample can be obtained from scientific sampling than from a study of the entire population. Even though we do not plan to survey the entire population, the question remains: what sample size is necessary.

The choice of sample size depends on:

1. time and money available
2. the objectives of the survey
3. available knowledge of the population

The time and money constraints determine the maximum sample that can be obtained. If the sample size required to meet the objectives of the study requires more resources than are available, there are only three choices. Either the objectives can be modified or more resources must be obtained. Or, the method of obtaining the desired sample can be structured to reduce the cost of data gathering. As will be discussed later, one technique, the mail questionnaire is well suited to surveying large samples at a minimal cost.

An objective of the study will determine, for any population, the appropriate sample size of the study. The two primary things to ascertain are the level of accuracy (sampling error) required and the number of intragroup comparisons to be made.

It is intuitively obvious that if either the entire population is studied or if only the member of a (completely homogeneous) population (i.e. the population of water molecules) is surveyed that all measurements will represent the population with no sampling error. As the proportion

of the population examined decreases, the sampling error increases. Similarly, the more homogeneous the population, the smaller the sample required to achieve a specific sampling error.

However, the homogeneity or variance within a population is a fixed variable which is usually unknown. This means that the sample size is the main variable that can be manipulated to affect the sampling error.

When a sample is very small, the probable sampling error is so large that the data are worthless (WFS Central Staff, 1975). This is important when considering subgroups of the population. For instance, while our study will be looking at high school leavers, much of the analysis will break down the population into subgroups of various high school programs. If the sample in the subgroup is too small that analysis will be of no value. The factor that most influences sample size is the amount of detailed breakdown required by the planned analysis.

The effect of homogeneity of the population has been discussed previously. While it has an important effect on determining sample size, there is not enough a priori information on it to justify taking it into account. This is so, even though there has been a large number of studies on youth (see Literature Review). Sampling errors computed from survey samples are themselves usually subject to great sampling variability. Sampling theory, and the reported experience of many computations (c.f. Kish, Grove and Krokoti, 1976), emphasize the importance of not relying on the precision of individual results regardless of the size of the sample.

Our problem is to determine the sample size for a population with unknown characteristics that will give results with an allowable precision and will enable an analysis to be performed on a given number

of subgroups. An indicator of the potential sample size is available when we consider other studies of youth. A study by Breton (1968), surveyed 13% of all secondary students in Canada using a stratified probability sample design. Based on an estimated "leaver" population of 20,000 in B.C.¹ this will require a sample of 2,600 for each student population surveyed. However, this figure seems somewhat inflated when we consider that a longitudinal study of all Grade 10 students in the United States conducted by the Institute for Social Research (1969) considered 2,200 subjects adequate, based on a multi-stage probability sample. It seems reasonable to state at this stage that the maximum size of the sample will be 2,200 with the optimal size to be determined.

The remainder of this section will discuss a formula that will provide a sample size that will meet specific conditions of sampling error and subgroup comparisons, and will use that formula to determine the optimum sample size.

Dr. Jim Zidek of The University of British Columbia's Mathematics Department used a Bayesian approach to develop a formula for determining sample sizes for unknown populations (1974). Without delving into the mathematics involved, the basic approach attempted to make the likely error of the smallest possible magnitude when computed over the totality of all conceivable samples for potential values of any characteristic. This approach eliminates uncertainty both due to sampling variations and different distributions of characteristics. If ' p ' represents the number of subgroups, e is the sampling error and N is the population size, then the sample size required to meet those conditions is:

¹Source: B.C. Department of Educational Research and Standards Branch.

$$\text{sample size}^1 = \frac{2(p-1)N/N-1}{e^2 + 2(p-1)/N-1}$$

The following table indicates for the population of 20,000 the sample sizes required for various combinations of subgroups and errors:

Table 7
Sample Size for Population of 20,000
Number of Subgroups

ERROR	2	4	6
.05	770	2146	3325
.10	198	583	952
.15	88	263	435
.20	50	149	247

From the table it appears that a sample size of 1,000 in each year would allow a reasonable level of accuracy and allow a sufficient level of breakdowns. This figure would allow 6-way breakdowns with a 10% error expected. In addition, when we are comparing the 1971 leavers with the 1973 leavers the sample size will, of course, be two thousand. When populations exceed around 15,000 the sampling error depends on the sample size rather than the sampling fractions. That will mean those results will have less error due to sampling than within group analyses. For instance, when the population is 40,000 and the sample size is 2,000 the sampling error for four-way breakdowns is less than .06 per cent.

In conclusion, it appears that a sample size of 1,000 for each of the population years will give us a highly valid sample. The cost of

¹ The formula assumes randomized sampling.

such a sample will be discussed later (see Cost of Mail Surveys) but it is reasonable to say at this stage it would not be excessive.

Method of Data Collection

A key part of any research design is the method of data gathering. In this case the method used must elicit youth's school and work experience and attitudes. A secondary requirement is for a method that can be implemented at a reasonable cost. This is especially important when, as discussed previously, a sample size of 2,000 is required to achieve useful and valid results.

The two methods that are most likely to be of use are personal interviews or mail questionnaires. The personal interview has the advantage that, in most cases, studies based on interviews have had a very high response rate, usually over seventy-five per cent. In addition, the interviewer can explain the meaning of unclear questions and delve into areas of interest.

There are two main areas where the interview method has disadvantages. The first is that there is a possibility of biased or incorrect responses. The phenomenon of interview demand is well documented (Lansing *et al.*, 1961). Responses may be biased in the direction of social desirability of what the respondent feels is the interviewer's opinion. While this bias may also occur in mail questionnaires, it is much less likely because the subject has a greater sense of anonymity and questions are in a uniform form.

An even larger disadvantage is that of cost. Lansing and Morgan (1971) examined the costs of a number of large-scale interview surveys.

They found field costs in 1968 varied from fifteen dollars per interview up to forty-eight dollars per interview, depending on the nature of the study.

In contrast, Dillman (1974) reported on the costs of four large-scale studies that used mail questionnaires. After considering all costs, including preparing data to the point of analysis, he found that in no case did the cost per completed questionnaire exceed three dollars.

Therefore, when considering the cost factor, the mail questionnaire is the best method to use for data gathering in this study. Chapter 4 will review the disadvantages and advantages of the mail questionnaire, and develop a methodology that will overcome the main disadvantages of mail questionnaires.

CHAPTER 4THE METHODOLOGY FOR MAIL QUESTIONNAIRESA. INTRODUCTION

In this section a methodology for using mail questionnaires is developed. The accepted advantages and disadvantages of mail questionnaires, and examples in the literature of how the major disadvantages can be overcome are discussed. In the next chapter an example of a twenty-four page mail questionnaire which used most of the methodology advised herein, including the use of a computer, is given.

Advantages Of Mail Questionnaire

Mail questionnaires are widely used in many types of surveys; for instance public opinion surveys, television and radio ratings and social science research. This is because there are a number of major areas where mail questionnaires have advantages over other methods such as interviews and non-obtrusive methods. The following advantages when considered together as a package make mail questionnaires very useful.

The prime advantage of mail questionnaires is that they permit a wide coverage at minimal expense. This advantage is particularly useful for reaching people scattered over a large geographic area, or who may be difficult to locate for a personal interview. This greater coverage may result in greater validity through a larger and more representative sample.

In addition allowing the subject to respond to the

questionnaire on his own permits more considered answers and is advantageous when the respondent has to check his information. As well the respondent has a greater sense of privacy and anonymity; for instance a respondent may be more willing to admit to being unemployed when he does not have to give that information verbally.

Finally, mail questionnaires have the advantage that interviewer effect is lessened, and there is uniformity in the manner in which questions are posed. This is not to say that all biasing due to "interviewer demand" will be eliminated, but that the researcher can control this effect through the construction of the questionnaire and covering letter.

In summary, it is apparent that the mail questionnaire is an attractive instrument for gathering data. The main advantage is that a larger, more dispersed sample can be reached at minimal cost.

Disadvantages Of Mail Questionnaires

The major weakness cited in the use of mail questionnaires is low response rate. Those who answer the questionnaire may differ from the nonrespondents giving a biased sample. Therefore many users feel that is necessary to have a short questionnaire (Wallace, 1954).

However, there are many cases where users of mail questionnaires have obtained response rates comparable to other methods, even with questionnaires exceeding fifteen pages (e.g. Eckland, 1969; Champion and Sear, 1969). In achieving those results the common characteristic was that they took into

account the nature of mail questionnaires. They did not just send out questionnaires and hope for the best. A major part of this paper discusses what has been found about achieving high responses to mail questionnaires, and the effects of such factors as questionnaire length.

As is apparent the first and most often cited disadvantage of mail questionnaires can be largely discounted, namely, the need for a short questionnaire. However, there are still some other disadvantages that one should be aware of. As well, it should be emphasized that even with a large response rate it is necessary to take the possible biasing effects of nonresponses into account (as will be discussed later in detail).

A major disadvantage of mail questionnaires is the possibility that the respondent may misinterpret the question, and the lack of follow-through on misunderstood questions or evasive answers. An important problem confronting researchers is missing answers to questionnaires which may invalidate other responses of that respondent for data analysis. For this reason it is important that questionnaires are designed so that the respondent will see all the questions. Furthermore covering letters and instructions should point out the necessity of answering all applicable questions.

Finally, mail questionnaires suffer from a problem common to all self-report data, namely, the assumed tendency to distort answers in a direction favorable to the sponsor of the survey, or the respondent. Solutions to this problem will be discussed in the section on Covering Letters and on Anonymity.

INCREASING MAIL QUESTIONNAIRE RESPONSE RATES

This section discusses the factors that influence response rates and how these factors can be manipulated to achieve high response rates.

The Covering Letter

A covering letter should accompany any mail questionnaire. The major purpose of the covering letter is to convince the respondent to take the time to fill out the questionnaire. For this reason the wording of the letter is of paramount importance.

The letter serves a number of purposes. It introduces the researcher to the subject and asks the subject's help by answering the questionnaire. It should enhance factors of convenience and encourage the subject's commitment.

Convenience can be emphasized in the covering letter by pointing out that a 'pre-paid self-addressed envelope' is included. Also, by assuring anonymity the user will be more willing to transmit information about himself. Both these points should be covered and emphasized in the letter. As well, an estimate of the time required to fill out the questionnaire may be beneficial.

Dillman (1972) found a covering letter that conveyed an image of social utility and stressed the importance of each individual response received over a 75% response from two independent surveys of 4500 respondents each. The importance of ensuring that the appeal of the letter is fitted to the group being studied is shown in research by Champion and Sear (1969).

These researchers looked at two types of covering letter. The first was egoistic, that is emphasizing the benefits to the respondents such as the chance to express themselves. The second type was more altruistic, emphasizing the direct benefits to the research organization. He found that for those with lower socio-economic status that the response rate was over 60.5% for those who received the egoistic letter versus 33.2% for the altruistic letter.

The other major use of the covering letter is to transmit to the subjects the value of their individual response and overcome any feeling that they will be just one of a thousand 'numbers'. The best way to accomplish this is by personalizing the covering letter and thereby encouraging a belief on the part of the respondent that he is receiving the researcher's personal attention.

Matteson (1974) used a survey design with a control group receiving a form letter, and the test group receiving a semi-personal letter. He found that the return rate for the semi-personal letter was 31.9% as opposed to 22.0% for the form letter. The study by Dillman (1972) attributes the high response partly to the covering letters having a personalized appearance, with names and street addresses being individually placed on each with matching type and the project director's name being individually signed.

The above studies demonstrate that personalization does contribute to a high-response rate. However, those researchers did not determine the extent to which, personalization alone contributed to the high response. Dillman and Frey (1974)

carried out an experiment in which only the variable of personalization was manipulated. Basically, two random groups of alumni were sent 8-page questionnaires. Both groups were sent a followup postcard and a second followup letter. However, one group's correspondence had their name and address placed on each letter in matching ink, and was signed with the project director's signature, while there was no personalization on any of the other group's correspondence. The results showed that the personalization made a significant ($p < .01$) effect of nearly nine percentage points (77.1% vs. 68.7%).

The researchers concluded, "Personalization effects have substantial significance for making the mail questionnaire a viable technique for the collection of social science data (p. 301)." Therefore, personalization should form a major part of any research design for mail questionnaire surveys.

Anonymity

In examining the importance of anonymity two factors must be considered; one, the effect on response rate and two, the effect on response bias. In looking at this it should be kept in mind that identifying who responded to the questionnaire is important for followups and to determine where possible areas of bias may show up. Of course, identifying respondents does not preclude confidentiality of results (a basic ethical requirement in most research). What is of concern is that the subject may perceive his anonymity as threatened. It is important that the format of the letter and questionnaire reduce this effect.

Klein, Maher and Dunnington (1967) examined the differences

between identified and anonymous subjects in responding to an industrial opinion survey. While they were not using a mail questionnaire their study is useful in demonstrating possible biasing effects resulting from the subject's perception of anonymity. Klein et. al. first broke their sample into two groups by random assignment. In all cases subjects were assured that no attempt would be made to identify anyone to management. However, while the first group's responses were completely anonymous, the second group was asked to place a personal identifying number on their questionnaire for research purposes only. Therefore, in their cases confidentiality was assured though anonymity was not. Half the identified group were further placed in a 'high threat' situation through the process of their manager personally telling them they were to place an identifying number on the questionnaire. The question now is what effect does being identified have on responses to a survey, and secondly are biasing effects further increased through the method of identification.

The results show conclusively that a positive distortion (i.e. in favor of the firm) took place under both identified conditions, and that under the 'high threat' situation the effect was significantly greater. Klein et. al. found that biasing effects depended upon the type of question. Items dealing with salary and with ratings of top management produced consistent positive distortion, whereas items dealing with work pressure and the respondent's manager resulted in little or no distortion even under conditions of high stress.

The implications of Klein et. al.'s research are two-fold.

First, care must be taken in designing questionnaires to assure minimal distortion due to perceived threat associated with identification of the respondent. Secondly, and perhaps more important for the user of mail questionnaires; when identifying respondents, the covering letter should endeavor to assure the subjects of their anonymity, as well as the confidentiality of their responses to those outside the research staff.

Fuller (1974) in a study on the effect of anonymity on return rate and response bias in a mail survey provided further findings on this subject. Fuller's sample of 13,000 officers and 32,500 enlisted men were divided into two groups, with one group being instructed to place their service number on the questionnaire.

With respect to response rate Fuller found that identified officers had a higher response rate (51% vs 40%; $-p < .01$) than anonymous officers, while the response of the enlisted men differed less between the two groups with a slighter higher response rate for those who were anonymous (39% vs 36%; $-p < .01$). Fuller stated the higher response rate for identified officers was due to a dampening of response motivation among the anonymous group because the perceived value of the specific individual's response was reduced. An alternate explanation is that officers tend to feel some pressure to respond and the anonymity instructions reduced this perceived pressure. In either case support is given to the earlier statement that the covering letter should be structured to the specific group at which it is aimed. This appears to be equally true for anonymity.

However, the validity of the results is as important as a high response rate. If cases occur where being identified increases the response, it must be considered whether this response is spurious because subjects may use the questionnaire in a Machiavellian attempt to improve their status. Fuller found that differences between the identified and anonymous group in answers to attitude questions were infrequent and small. However all differences were in the direction of social desirability. None of the anonymous-identified group differences for the enlisted men's questionnaires were large enough to be of practical importance. The conclusion gathered from Fuller's research is that there is an effect in the direction of social desirability, but the magnitude of this effect is in most cases not significant.

Looking at the Fuller (1974) and the Klein et. al. (1967) papers together the conclusion is that it is important for the researcher to stress the confidentiality of the responses, but that the effect of actually having a means of identifying the respondent depends on the nature of the study and the characteristics of the population under study.

The Effect Of Questionnaire Length

The data value of the mail questionnaire would be somewhat restricted if it was limited to, say, four pages in order to receive a reasonable response rate. Common sense dictates to many that the shorter the questionnaire, the more likely a high response rate. Many people looking at the use of mail questionnaires have accepted this belief without trying to find

evidence to support it (Berdie, 1973). Surprisingly, based on the empirical evidence available, in most cases questionnaire length has only a small, if any, effect on response rate.

In Sletto's (1940) study the subjects were sent 10-page, 25-page and 35-page questionnaires with response rates of 68%, 60% and 63% respectively. Berdie (1973) sent a stratified random sample of 108 university professors a one-page, two-page and four-page questionnaire. In both cases, while there was a relationship in the direction of a lower response for a longer questionnaire, it was not statistically significant.

Berdie's study is important because it was designed solely to test the relationship between length and response rate, and, therefore avoided methodological weaknesses in previous studies that were looking at other possible confounding variables (e.g. Robin, 1965).

Champion and Sear (1965) also examined the effect of increasing the number of pages while keeping the content the same. These researchers found using three, six and nine page questionnaires that significantly more nine-page questionnaires were returned than three-page questionnaires.

Thus the evidence suggests, but does not prove, that reducing the time required to fill out the questionnaire may reduce the response rate but not as much as one might expect. Increasing the number of pages without changing the content might actually increase the response rate if it improves the format.

Obviously the questionnaire should not contain unnecessary questions and it should be as easy to fill out as possible, but

the amount of information requested should not necessarily be reduced merely for the sake of brevity. High response rates can be achieved for long questionnaires as well as for short ones if good methodology is used.

Type Of Postage

Getting high returns from mail questionnaires can be considered a science, and accordingly, it is necessary to examine all variables that can influence response. The type of postage used, both on the mailing envelope and return envelope is an important variable that can be easily manipulated.

When considering the type of postage used to send the questionnaire, there is a choice between first class mail or bulk third class mail. The main reasons for using first class mail are that the post office will attempt to forward it, and it has shorter and more reliable delivery times.

Champion and Sear (1969) point out that in general, the more expensive the postage used the greater increase in response. The question still remains whether the additional benefits warrants the extra cost. Champion and Sear found a significant difference ($p < .05$) between regular postage and bulk postage, with 419 being returned with regular postage versus only 383 with bulk postage. On their followup they found using Special Delivery resulted in 90 returns versus only 61 for regular postage ($p < .001$). It appears that more expensive postage does have an incremental effect on response rate.

When using first class mail a consideration is that a postage stamp as opposed to a meter stamp increases the

personalization of the total package.

Dillman, using a sample of over one thousand, performed a two step experiment where newly issued ecology stamps were used on half the initial mailing and the remainder were metered. These samples were divided and a new postmark was applied to half the postcard followups. The independent effects were as follows: 23.8 percent metered vs. 24.2 percent stamped and 30% of the new postmarks vs. 31.1 per cent of the old.

Dillman's results indicates very little gain from the extra labour from using stamps. The personalization effect of hand-stamping appears not to be an important consideration.

A second area where postage is of concern, relates to the return envelope. In all cases it should be pre-addressed and no mailing cost should fall to the respondent. However, there is a choice between business reply envelopes, enclosed postage stamps or other methods.

A postage stamp may increase the obligation of the subject because if he does not respond the sender is out the price of the stamp. On the other hand the cost to the sender increases because of the extra labor involved and the cost of nonreturned stamps. The business reply envelope, while avoiding the expense of unreturned questionnaires, might be associated with junk mail. The third method, that of an interplant (in-house) mail system, saves postage cost, but could result in biasing effects if the respondents felt their anonymity threatened.

Veiga (1974) sent one hundred managers a mail questionnaire using these three different types of return methods. Table 8 outlines the results.

The results indicate that on the basis of returns the interplant mail system provides the best results and is most economical, while the business reply envelope is much less

Table 8
Questionnaire Returns By Mailer Type

Mailer Type	Questionnaire Returns	
	Return Rate	Length Of Return
Interplant	82%	13 Days
Stamped	80%	17 Days
Business Reply	57%	25 Days

Source: Veiga, John, "Getting The Mail Questionnaire Returned: Some Practical Research Considerations", JOURNAL OF APPLIED PSYCHOLOGY No. 2, 1974, page 217 effective. However, the value of this study is lessened because of the small sample size (less than 34 for each group). As well the questionnaire had only 13 questions which meant that the envelope was a major part of the overall package. Therefore its contribution to the image of the questionnaire as junk mail is greater than when the questionnaire implies that some expense has gone into the project. The covering letter enhances this impression.

In order to obtain the maximum possible return for mail questionnaires the relative costs and effects of different types of postage should be considered. In all cases, it should be kept in mind that other factors such as followups may have a greater effect than postage, and resources should be allocated accordingly.

Incentives

Using incentives such as cash enclosed with the questionnaire or offering prizes to respondents is often considered a good way to increase responses. However, the use of that sort of device often offsets much of the value of using mail questionnaires by increasing the costs and making it difficult to use with a large number of cases. In order to determine the value of incentives it is necessary to look at what users of mail questionnaires have found.

Huck and Gleason (1974) looked at the result of USING MONETARY INDUCEMENTS TO INCREASE RESPONSE RATES FROM MAILED SURVEYS. These researchers found that previous research had demonstrated that a monetary inducement can be effective. Robinson and Agism (1951) found a quarter (25 cents) to be effective in raising response rates, while postage stamps and lesser coins were not. Kephart and Bressler (1958) concluded that while the quarter was effective in increasing the response rate (70% versus 52%), it was no more effective than a questionnaire with an ordinary follow up (68%).

Huck and Gleason (1974) explored two aspects of using monetary incentives. One, has inflation caused the value of the quarter to depreciate since the late 1950's and, secondly, would the effects be lessened if the monetary inducement was sent out on a followup mailing, thereby reducing the total cost.

A fifty question survey was sent out to 200 randomly selected university students broken down into four groups, with the first group receiving the incentive on the first mailing, the second group on the second mailing, the third group on the third mailing (i.e. second followup) and the fourth group

receiving no incentive.

The researchers found that on the first mailing the questionnaire was returned by 78% of subjects in the first group (i.e. all received incentives), versus 50% in all the other groups. After two mailings group 1 had a 92% response rate versus 85% for group 2 ($p > .05$) and 65% for the other two groups. The combined results after all three mailouts were 94%, 92%, 78% and 71% respectively for the four groups. Chi-square tests revealed that groups one and two did not differ significantly, nor did group 3 or 4 differ from each other.

The optimal strategy appears in this case to send the monetary incentive on the second mailing. It should be emphasized that neither this writer nor Huck and Gleason (p. 224) feel that a monetary inducement should replace followups, but rather should be considered as a another tool to increase responses. A final point is that the above strategy worked well for a short questionnaire (i.e. less than fifty questions). It is possible that with a longer questionnaire that insertion of a quarter would have the negative effect of insulting the subject, while more proportional inducements would have the effect of raising the cost of the mail questionnaire substantially. In conclusion monetary inducements have value, but that value is more certain for short questionnaires.

Followups

I. The Need For Followups

Increasing response rates through the use of followups was

discussed earlier. A thorough review of the literature has demonstrated that followups are a necessity in any use of mail questionnaires. While followups alone will not result in the maximum possible return they are the basic rudiment in achieving high returns from mail questionnaires.

Dillman (1972) who achieved a high response rate (> 75%) concluded (p. 257) that, "Although it is not possible in this effort to isolate which of the techniques were most important, the results do suggest that one factor - persistence - is especially crucial" and "that no matter how well the researcher does the preparing, packaging and delivering, good techniques at these stages alone are not enough. Persistence pays off."

Droege and Crambert (1965) further support Dillman's assertion. Records were kept on the success of techniques to obtain followup information on 12,615 individuals two years after leaving high school using a multitude of techniques, but in all cases relying mostly on postal followups. An over-all response rate of over eight-seven per cent was obtained. Their conclusion was that, "In most cases it would be worthwhile to send as many as three letters, if needed, before trying another technique."

Robin (1965) also demonstrated that high response rates can be obtained from mail questionnaires if a sound methodology based on followups is used. Robin presented data derived from ten independent samples who responded to mail questionnaires in a total of five completely separate studies. The average response rate was 86.8% with only one survey falling below 81%.

Robin's (1965) results are particularly interesting when

considering that, "In none of these researches were responses gained by the use of telephone calls, telegrams, special delivery letters, or monetary reward for responding. Only stamped envelopes were used (p. 28)." One aspect that led to his high return rates was "a minimum of two and a maximum of five contacts with the potential respondent (p. 26)." Again, persistence is the key. It is important to emphasize that followups alone are not enough to achieve a high response, but that they form the basis or stepping stone to this goal. As Robin (1965) points out, a major part of his system was based on a well-worded and personalized covered letter which increased his "success in eliciting subject responses (p. 33)." The final example of the values of followups in surveys using mail questionnaires comes from the results of a followup study by Project Talent on high school graduates, one year after graduation. Project Talent in 1960 tested a representative sample of 440,000 grade 9-12 students with a two-day battery of cognitive and non-cognitive tests and inventories (discussed by Flanagan et. al., 1962). What interests this study is their success in surveying over 88,000 of the subjects over a wide geographical region (Orr and Neyman, 1965). The scope of this task made personal contact infeasible for the collection of followup data.

Project Talent's method included four waves of mailing. The questionnaire was designed to maximize response by limiting the time required to complete it to twenty minutes. Questions were formatted so it was necessary for the respondent to just check an answer box. A short theme, a covering letter and a pre-paid

mailer were included as well. Orr and Neyman (1965) reported that, "the response rate was slightly over 70 percent which is somewhat higher than ordinarily expected." In addition the completeness and accuracy of the information provided seemed to be relatively high (p. 378)."

The empirical evidence strongly indicates that mail questionnaires can be a valid reliable instrument for gathering data, and that high response rates can be obtained through a strong methodology. The questions that will now be discussed are those of optimal time-periods for mailing questionnaires, the cost of followups and the biasing effects of 'prodding'.

II. Timing Of Followups

Given that followups are an important fact in achieving high response rates from mail questionnaires there still remains the decision as to the time interval between successive mailings. Two factors are at play here. One, the time period should not be so long that the subject would have little cognizance of the questionnaire from previous mailing. In this regard it is feasible to send just a reminder without a replacement questionnaire if the researcher can reasonably assume that the subject still retains the questionnaire sent earlier. The second consideration stems from this. Namely, assuming the researcher wants to optimize the cost of his research, he should avoid sending reminders or replacement questionnaires to those who will respond without receiving them.

A study by Nichols and Meyer (1970) examined timing postcard followups in mail-questionnaire surveys. They were

interested in the optimum timing of a reminder postcard to nonrespondents. A twelve-page questionnaire was sent to 1,600 college students, with half the group being mailed a followup postcards three days after the questionnaire was mailed. An additional followup was sent to half of each group sixteen days after mailing the questionnaire and to the other half of each group twenty-seven days after mailing the questionnaires. After 45 days additional efforts were made to obtain responses from all groups, including a second mailing of the questionnaire. After sixteen days 58% of the group receiving the postcards had responded versus 37% of the no-cards group ($p < .01$). After 120 days when all followups have ceased the results were still significantly higher ($p < .05$) for the 3-day postcard group (88.5 versus 84%). This leads the authors to conclude, "that the 3-day postcard produced a response from some subjects who could not be induced to respond by followups at a later time. (p. 307)."

After 45 days there was no significant difference between responses for the 16-day followup and the 27-day followup. The second followup did have a greater effect on the group with no 3-day followup. In other words, responses were secured from people who would have responded to the 3-day followup.

In summary, the 3-day postcard was found to be the single most effective followup in the study, with the best response rate being obtained from a combination of an early and late followup. Sending a 3-day postcard is especially beneficial since each additional response induced saves the time and cost of sending out duplicate questionnaires. Given the proven success of post-card followups it appears users of mail

questionnaires should strongly consider their usage.

The Orr and Neyman (1965) report on Project Talent's followups pointed out that they found that reminders after the first and second wave of questionnaires had little discernible effect as compared with mailing new questionnaires and that where there is relatively little cost difference in sending a reminder or a new questionnaire, the latter is more effective. Dillman (1972) supports this, as he found that the inclusion of a replacement questionnaire in the third mailing has a substantial effect (32 percent versus 22.4 percent). As the above two studies did not use a 3-day followup, Nichols and Meyer's (1972) conclusions are not contradicted. Rather the additional data confirms the importance of sending a duplicate questionnaire on any followups after the initial period.

Nichols and Meyer have found that 3-days is optimal for a postcard reminder, but what about additional followups?

Robin (1965) reviewed the interval between mailings used by a number of researchers (p. 27-28) and concluded that, "In light of this research, it seems that a seven day interval between mailings would promote maximum response (p.28)." The earlier discussion of Robin's results indicates strongly that his procedure is effective. The short duration of one week means that followups are being sent to those who would have responded anyway, thereby increasing the cost of mailing. It should be mentioned that Robin (1965) included an additional questionnaire in the second followup which was sent two weeks after the questionnaire was sent out. This time period seems a reasonable one in which to expect the original questionnaire to be

misplaced.

Dillman (1972) sent a reminder postcard after one week, a three-week letter informing each respondent they have not sent in their questionnaire, and a seven-week letter sent by certified mail, containing a replacement questionnaire. His results were comparable with Robin's (1965). However the effects of certified mail was a factor in Dillman's results. This may be contrasted with the more frequent followups used by Robin.

It appears after looking at the empirical evidence, that a followup postcard mailed within one week of the initial survey is highly effective in eliciting response to the questionnaire. As well, subsequent followups should include a second questionnaire at some point, as it appears that many recipients misplace initial questionnaires. Perhaps the fact of having received a second questionnaires goads the recipient to respond.

III. Biases Due To Prodding

Eckland has questioned the extent to which prodding lowers the veracity of late respondent's returns. Table 9 presents the four types of checks performed by Eckland:

In general, a slightly higher proportion of respondents from the second stage of prodding gave discrepant answers when opposed to the first group of respondents. However, when looking at discrepancies between the groups who were prodded over three times through telephone calls and certified letter, they appear no more discrepant than respondents from the initial stage. The major difference between discrepancies among the three groups occurred with respect to academic failure. This may be somewhat

artifactual as Eckland was dealing with populations of university leavers, and a major finding of his research is that on all indices the late respondents were the least successful

Table 9
Percentage Of Respondents In Each Stage Of
Prodding Whose Replies Were Found Discrepant

Item	Wave 1	Wave 2/3	Telephone/ Cert. Letter
Fathers Occupations	15.7	20.4	22.6
City/farm Residence	8.4	8.4	6.5
Academic Failure	25.0	35.4	24.6
Earned Degree	0.0	4.0	0.6

Eckland, Bruce, "the Effects Of Prodding To Increase Mail-back Returns." JOURNAL OF APPLIED PSYCHOLOGY, 1965, vol. 49, no. 3 p. 167

students. In other words, there were potentially more discrepant answers during later stages of the study.

However, it does appear that the question of the effect of prodding on veracity is a valid one, and an area where more research is necessary. The potential bias in self-report data, as discussed earlier, is one that every researcher should be aware of in every stage of survey research.

IV. The Cost Of Followups

The cost of undertaking research using a mail questionnaire when taking the necessary steps to assure a high response rate is dependent on the resources available, as well as the scope of the study. However, it is useful to discuss the mailing costs of specific studies.

Orr and Neyman (1965) reported the cost for the Project Talent followup averaged 58.6 cents per respondent. While the

costs would be substantially higher today that figure can still be quite favorably compared with the costs of interviews in 1965.

Possibly, more relevant figures are available from Dillman (1972) who found direct costs of postage, paper and printing of questionnaires, envelopes and cover letters amounted to a fraction over 47 cents for each potential respondent (68 cents per completed questionnaire). Labor costs for data collection amounted to approximately 54 cents per potential respondent. The total cost worked out to \$1.01 per potential respondent (\$1.46 for each completed questionnaire).

Effects Of Nonresponse

Even using a sound methodology with mail questionnaires the literature suggests that one can usually expect a maximum response rate of ninety percent. This factor is one that should be carefully considered in interpreting the data obtained from the mail questionnaire. One step a researcher should take is to examine the data available on the nonrespondents and compare it with similar data on respondents in order to narrow down where biases may occur.

Donald (1960) in a sound methodical way examined the implications of nonresponse for the interpretation of mail questionnaire data. Her approach was based on assessing the interest or involvement of respondents and nonrespondents in a particular investigation. In reviewing the literature she found that in comparing response rates to successive followup procedures that high levels of interest or involvement are more

characteristic of early respondents (p. 100).

This is not surprising and is a reasonable supposition if one examines theories of motivation that are based on the idea that people are motivated to do something if they get intrinsic or extrinsic satisfaction from doing so. The value of Donald's research is that it supports that belief empirically.

A problem similar to that of nonreturns is that the respondent may miss some of the questions. In many cases missing answers invalidate the entire questionnaire for purposes of data analysis. This is because the validity of most statistical techniques is substantially reduced when adjustments are made for missing data.

Donald (1960) explored this area as well and found that those with less involvement or interest in the investigation would have a significantly higher degree of nonresponse to items within otherwise completed questionnaires. Furthermore she hypothesized that the rates of nonresponse would increase as members moved from questions about their own behavior to judgements about others, as well as about less visible organizational functioning (p. 107).

The results (p. 107-108) strongly supported both her hypotheses. There was little nonresponse to items dealing with current behavior, but nonresponse was greater in areas of future behavior. The trend for nonresponse increased substantially for each successive wave of followups, who as her research showed, were less involved or interested in the subject matter of the questionnaire.

The question now is what implications can be made from

Donald's (1960) results? One implication is that the researcher should endeavor to structure the covering letter and questionnaire so that the intended recipient will feel involved or interested in the subject matter and, therefore, will be more likely to respond. This is an area discussed repeatedly in this paper.

The second implication and one that Donald makes herself in interpreting the results is "The less complete the data are, the more likely that they are biased in favor of that section of the sample more actively involved in the subject matter under consideration and more likely to give favorable results (p. 112)". This effect is compounded when there is nonresponse to various items as those who are likely to miss a given item are those who can least be expected to give a favorable response.

The third implication relates directly to followups and how many followups should be done. For as Donald (1960) points out (p. 113) in the case of surveying the members of an organization, a more valid sample may be obtained through, say, a fifty percent response of more active members, than achieving a ninety percent response rate through continual prodding of less involved members. The researcher by considering the relationship between involvement and various items within the questionnaire should be better able to judge the weightings of nonresponse and as well be better able to determine the desired response level.

The conclusion reached from Donald's (1960) research is that in analysing data obtained from mail questionnaires the researcher should be aware of two possible biasing effects. The

first is because of a low response rate (to the questionnaire or specific questions) a potential area of bias occurs because the respondents consist of those more involved or interested in the particular subject matter. A converse problem often ignored by researchers is that a high response rate obtained by prodding may lead to bias, as those more involved with a cause or group are given equal weighting to those respondents who have little interest in the area under study. This problem, for example could be relevant when looking at members of volunteer groups. The above effects should be considered carefully when looking at the potential effects from nonresponse.

SUMMARY

The proposed study will gather data on the attitudes, interests and experiences of a representative sample of young people. As the summary below indicates the mail questionnaire is the best method for obtaining this information.

The mail questionnaire is an economical way of gathering self-report data. It is particularly useful for reaching people scattered over a large geographical area, or people who may be difficult to locate for a personal interview. Allowing the subject to respond on his own has a number of advantages. It permits more considered answers and it results in a sense of privacy and anonymity. This will increase the subject's willingness to respond to personal questions. The mail questionnaire also poses questions uniformly. This reduces the potential bias from "interviewer demand", which is a major problem with personal interviews.

The main criticism of mail questionnaires has been that response rates are low. In fact, this only occurs when the mail questionnaire is poorly designed. When the methodology developed in this paper is used high response rates can be expected, even with questionnaires exceeding fifteen pages.

While it is not true that response rates must be low, there are still some disadvantages. Even with a large response rate it is necessary to consider possible biasing effects of nonresponses. Also the respondent may misinterpret a question. For this reason, questionnaire composition is very important. Finally, as with all self-report data, there is a tendency to distort answers favorably to the sponsor of the survey, or the respondent. When using mail questionnaires awareness of potential biases will enable the researcher to determine the validity of the results.

The covering letter's major purpose is to persuade the recipient to respond to the questionnaire. The letter should stress the importance of the study, and more importantly of the recipients contribution. The latter effect should be enhanced through personalization. The letter should not have the image of a form letter and should be signed by an officer of the project. The composition of the letter is important and it should be geared to the group being surveyed. As the covering letter is usually the first contact with the subject it is worthwhile to devote the resources necessary to meet the above criteria.

Confidentiality of results is important for inducing response and minimizing the potential bias in self-report data. In most cases, it is necessary to identify the respondents to

allow followups and examination of differences between the respondents and nonrespondents. The recipient should be made aware of the reason for any identification and that it is for research use only. The effect of identifying the respondent depends on the nature of the study and the characteristics of the population under study.

While the questionnaire should not contain unnecessary questions, it does not have to be short to achieve a high response rate. When good methodology is used, the questionnaire length is not a major factor.

First-class mail should be used when sending out the questionnaire. This enhances the impression that the project is worthwhile. It also means that the post-office will make some effort to forward letters. The delivery time will be minimized and this will enable followup letters to be timed more accurately. A stamped addressed envelope should be included with the questionnaire and this fact should be specifically mentioned in the covering letter. Research indicates that a substantially higher response rate will accrue from using the stamped return envelope, rather than a business reply envelope. This may be less so for long questionnaires where the effect of the business reply envelope on the total package is less.

The response rate may be increased by enclosing a monetary incentive with the questionnaire, but the increase in response may not be worth the extra cost. However, some research has found that with less than fifty questions, enclosing an incentive of twenty-five cents in the first followup is worthwhile. With longer questionnaires a more effective

incentive would be to offer subjects a summary report of the study. This serves the dual purpose of repaying the respondent for their time, as well as increasing the respondent's involvement by promising feedback. People are more likely to respond when they are interested or involved with the topic. In that case the opportunity to find out what the researcher has concluded is a strong positive inducement to respond to the questionnaire.

While the good techniques discussed above are important, followup is the key to a high response rate from a mail questionnaire. As many as three letters should be sent in order to optimize the response rate. Through the use of followups the mail questionnaire become one of the best tools for gathering self-report data.

An analysis of the literature shows the most important followup is a reminder postcard sent three days to one week after the initial mailing of the questionnaire. The postcard should simply thank those who have already responded and ask those who have yet to return their questionnaires to do so immediately. A phone number where subjects can report lost or unreceived questionnaires should also be included. After the postcard reminder there should be a wait of two to three weeks depending on when responses start to drop off substantially. A second letter and replacement questionnaire should then be sent out. It is worthwhile to send another reminder postcard to the remaining nonrespondents one week after the second letter and questionnaire.

At this stage depending on the response rate so far and the

needs of the study the researcher may decide to send additional followups or use other methods found effective for persistent nonresponders such as phone calls and certified or registered mail.

One should keep in mind that prodding may have some dysfunctional effects as studies have found a higher preponderance of discrepant answers in responses from those who have to be prodded most to respond. For the methodology to be strong some questions that can be verified from known data should be included. These questions may be used to determine the potential falsity in the data and provide a means of comparing respondents with nonrespondents.

The importance of a high response rate depends on the nature of the study. This is because those less interested or involved with the subject are less likely to respond to the questionnaire. For instance, when surveying members of a volunteer organization only the opinions of those interested or involved in the organization may be sought. These are the people who will respond to the questionnaire with minimal prodding. On the other hand, it will be more important to prod a high response rate in a study of students who withdrew from university, as research has shown that those with the poorest academic records are less likely to respond to mail questionnaires.

A high response rate is very important in our proposed study. As was discussed in chapter 3, unless there is a high response rate the sample is likely to have a higher level of education than the population being studied. This would

significantly reduce the validity of the proposed study as education is one of the major variables.

In all cases it will be worthwhile for researchers to compare respondents with nonrespondents in order to determine likely areas of bias. This can be done in two ways. First of all, some information will usually be available on all the subjects. Such information as sex, age, marital status and education is often available for comparing respondents with nonrespondents. As well, an intensive effort should be made to contact some of the nonrespondents, possibly over the phone, to find out the reason for their nonresponse and to receive supplementary data for comparison with respondents. Through being aware of possible areas of bias a researcher is able to increase the validity of his study substantially.

In conclusion, the mail questionnaire is a very effective research instrument for gathering self-report data. By following the steps recommended in this chapter, mail questionnaires can be used to obtain high response rates with good validity at low cost.

Chapter 5

SPECIFIC QUESTIONNAIRE DESIGN AND ANALYTICAL STRATEGY FOR THE PROPOSED STUDY

Introduction

This chapter discusses two major components of the proposed study. The questionnaire will provide the data necessary to answer the questions that will be investigated, and the strategy for the analysis of data will present the statistical tools that will answer the questions.

Questionnaire Design

In conducting any survey research a major determinant of ultimate success is the design of the questionnaire. This is even more important in the case where attitudes are being measured. In constructing the questionnaire for this project the following four criteria were considered necessary for attitude scales that are included.

1. *Validity* - does the instrument measure the attitude or trait it purports to measure. This is determined by looking at how the test was constructed (content validity) it's correlation with other instruments that purport to measure the same thing (where applicable) and whether its correlation with other variables are consistent with the theory regarding the trait it is measuring (predictive or concurrent validity).

2. Is the instrument *reliable*? - Basically, this asks can one be confident that if two individuals have different scores on a test, that this is a true difference and not due to measurement errors.
3. Is the instrument *suitable* for use by our particular population of youth one and three years out of high school? This will be determined by examining what studies the instrument has been used for and the validity of the results.

As well, we will be concerned that the instrument does not require a level of verbal sophistication that will exclude part of the sample.

4. Will we be able to look at cross-cultural differences by examining other studies that used the same instrument? This requirement is included so our data will be of maximal utility, especially given Canada's French and English background.

The remainder of this section discusses the instruments used, their sources, and evidence of how they meet the above four criteria.

As is apparent from the discussion on what questions suggested for investigation (Chapter 1), the mail questionnaire has to include measures of the following:

1. Work History
2. Educational History and Plans
3. Job Satisfaction
4. Job Involvement
5. Individual Self Development
6. Attitude to work as measured by:
 - a. Meaning of work
 - b. The Work Ethic
7. Self Sufficiency
8. Self Esteem

In measuring the first two items an important criterion was to design these questions so that answering them could be accomplished simply by checking the appropriate answer in order to reduce the respondent's time to answer these questions and to simplify coding.

Job Satisfaction (see Appendix A, pages 15 to 19)

Job Satisfaction can be considered to be a collection of feeling or affective responses associated with the job situation (Imparato, 1972). In this study, job satisfaction will be measured by the J.D.I. (Job Description Index) constructed during the course of the Cornell studies of job satisfaction (Smith *et al.*, 1969). This instrument has shown high reliability, as well as discriminant and convergent validity with interviews and other rating methods (Robinson, Athanasiou and Head, 1969). A major advantage of this instrument opposed to other reliable and valid instruments (c.f. Porter Need Satisfaction Questionnaire) is that a high level of verbal sophistication is not required by this test as it just requires simple yes-no answers to a series of adjectives.

Job Involvement (see Appendix A, page 14)

Job involvement has been taken to be the psychological identification with work, and work as contributory to one's self-esteem (Lawler and Hall, 1970; Lodahl and Kejner, 1965). It will be measured using the 6-item, shortened version of the Lodahl and Kejner instrument (Lodahl and Kejner, 1965). This was derived from their original 20-item scale. The split-half correlation of the 6-item scale was found to be .57 and the

reliability coefficient was reported to be .73. The correlation between the shortened version and the original instrument was found to be .87. Evidence for the convergent and discriminant validity of the Lodahl and Kenjer instrument was supported by Goodman, Furcon and Rose (1969). The responses were obtained in the form of a seven-point Likert-type scale. In all but one of the questions (item 6) answers, which reflected strong agreement were interpreted as indicating high I. This is a departure from the negative scoring used by Lodahl and Kenjer in their instrument (1965). The positive scoring was adopted for ease of analysis. The direction of scoring was reversed for the negatively worded item 6.

Work Attitudes

Individual self-development, self-sufficiency, meaning of work and the work ethic will be measured by scales from the Youth Opinion Questionnaire (YOQ) used in the study "Youth Employment: Frictions in the Threshold of the Work Career - An Exploratory probe." The YOQ was developed through an extensive process by which 467 items designed to sample a wide range of work attitudes was administered to more than 5,000 high school students in Minnesota, and was factor analysed to yield 30 attitude scales.

Scoring for the self-development, self-sufficiency, and meaning of work scales is scored 1 to 4, with a high score indicating a favourable attitude to work, and a low score an unfavourable attitude. The pair-comparison scales were scored employing weights of 1 and 0 with the response alternative in each pair which defined the scale weighed 1 and the other 0.

The internal consistency reliability for the scales are shown in Table 8. The reliability coefficients show high internal consistency reliability.

Table 8

Scale	Location in Appendix A	Reliability
Self-sufficiency	page 2 to 4; questions 3, 6, 10, 13, 15	.80
The Work Ethic	page 2 to 4; questions 2, 5, 7, 9, 12	.71
Self-development	page 1	.85
Meaning of Work	page 2 to 4; questions 1, 4, 8, 11, 14	.80

Self-esteem (see Appendix A, pages 5 to 6)

Self-esteem will be measured by the self-esteem scale developed by Rosenberg (1965) for a large scale survey of high school students. As well, the Survey Research Institute used this instrument in adult surveys and found it was adequate for that purpose (Robinson, 1969). Rosenberg designed the Self-Esteem Scale with several criteria in mind. One was his conception of self-esteem.

. . . When we speak of high self-esteem. . . we shall simply mean that the individual respects himself, considers himself worthy, he does not necessarily consider himself better than others, but he definitely does not consider himself worse, he does not feel that he is the ultimate in perfection but, on the contrary, recognizes his limitations and expects to grow and improve. . . .

Another criterion was ease of administration. Since the scale had to be completed along with several other scales in one class period, it was held to 10 items. The other criterion, unidimensionality (Guttman) and validity are discussed below. Using the Guttman procedure, the reproducibility of this scale was 92% and its scalability was 72% for Rosenberg's sample of 5,034 students. He also mentions in a footnote (p. 30) that a study by Earle Silber and Jean S. Tippet showed a test-retest reliability of .85 for a group of college students retested after two weeks.

Validity was determined by examining correlations of a number of different samples of self-esteem with depression, psychosomatic symptoms and choice as a class-leader respectively. In each case the correlation was consonant with what theory would predict. As well, scores on self-esteem were compared with ratings by judges familiar with the subjects and were found in agreement.

Analysis of Data

In designing a general purpose study of this nature, the plethora of variables to be analysed means that it is not feasible or optimal to spend the amount of time necessary to build an analysis sequence containing a large number of hypotheses. Rather, it is more relevant to this proposed study to point out what questions should be investigated (Guba, 1971). As discussed in Chapter 1 the following types of questions should be investigated:

1. What is the employment experience of youth?
Here we will be looking at not only youth's job history, but their satisfaction with work, and the role of work in their life (job involvement).

2. What personal characteristics and attitudes are related to satisfactory employment experiences, and which one's are related to unsatisfactory experiences?: Self-esteem, self-sufficiency, self-development, the meaning of work, the work ethic will be examined for our sample as well as their background characteristics.
3. What role does the educational system play in preparing youth for work?: This will involve examining the youth's school programme and school experiences.

The analytical framework used will be structured with the intent of developing data to enable us to develop answers to the questions, and to propose how a better fit can be made among the needs of youth, industry and the educational system. Data collected will include the following variables:

(a) Independent Variables

- (i) "work attitudes" as defined by four scales of the Youth Opinion Questionnaire:

Self-sufficiency
The Work Ethic
Meaning of Work
Self-development

- (ii) "Self-esteem" as defined by the Rosenberg Self-Esteem Scale.

- (iii) Educational History and Plans which will include:

High School Programme
Whether high school graduate
Educational plans
Post-secondary education
High school counselling
Reasons for dropping out

(b) Dependent Variables

- (i) "Patterns of work experience" which will include the following variables:

Number of jobs held
 Average tenure on jobs held
 Average time to find jobs
 Average pay on past jobs
 Present pay rate
 Ratio of employed to unemployed time

- (ii) "Job Involvement" as defined by the Lodahl and Kajner Job Involvement instrument.

- (iii) "Work satisfaction" which will be measured by the Job Description Index along five dimensions:

Work
 Supervision
 People
 Pay
 Promotions

(c) Control Variables

Data will also be collected on certain control variables, which will include the following:

Sex
 Urban vs. rural background
 Age
 Marital status

The following analyses are planned:

1. Cluster analysis - Analysis of the variables relating to work experience will be undertaken with the aim of defining patterns of employment experience common to numbers of workers. Cluster analysis will be used to accomplish this objective. Scale scores on the Job Description Index will be used as the work satisfaction variables.
2. Single variable analysis - The interrelationships of variables and the relationship of each variable with work experience patterns will be examined in two ways:

- (i) by correlational methods, including factor analysis, and
 - (ii) by tests of mean differences (t- or F-tests) on the variables other than work experience when individuals are grouped by work experience patterns. When examining the relationship of each variable with the satisfaction variables, the same two methods will be used except that tests of mean differences will be made on the satisfaction variables.
3. Multivariate analysis - The relative importance of different independent variables in determining the work satisfaction variables and job experiences will be investigated in two ways:
- (i) by the multiple regression method, taking each dependent variable separately (i.e., one multiple regression analysis will be undertaken for each dependent variable), and
 - (ii) by the canonical correlation method, in which the entire set of independent variables is correlated with the entire set of dependent variables. In both cases, weights (regression or canonical) will indicate the relative importance of the independent variables. These relationships will also be examined when individuals have been subgrouped on the basis of work experience patterns and background characteristics. As well, the ability of different variables to discriminate between those who have successfully made the transition from school to work will be investigated by: taking each of self-esteem scores, satisfaction scales, work experience as dependent variables, performing a step-wise multiple discriminant analysis on them.

Chapter 6

AN EXPLORATORY INVESTIGATION
USING THE METHODOLOGYIntroductionTesting the Mail Questionnaire MethodologyIntroduction

In this study the situation that young people face in the world of work has been identified. Namely, difficulties in finding employment in general, and, specifically in finding satisfactory employment. While a number of questions have been posed (see Introduction, p.1) whose answers would likely help alleviate the problem, the main objective of this study was to develop a research design that would enable future researchers to answer the questions identified in this study and other relevant questions with high validity at a reasonable cost.

The research design includes a recommended sample size, the development of a questionnaire that includes validated scales to measure many of the attitudes possibly related to work transition, a recommended analytical framework and the development of a methodology for obtaining a high response rate to mail questionnaires. However, a pre-test is required to determine whether the questionnaire could obtain useful information for a population of B.C. high school leavers, and whether using the mail questionnaire methodology would result in the high response rate predicted.

Therefore, a second part of this study involved sending out the questionnaire developed herein to a sample of over 600 high school leavers. The main objectives in this pre-test were to ascertain if high school leavers, particularly dropouts, would complete and return the questionnaire and if some meaningful results could be obtained even when the full research design was not used. The full research design was not carried out because of insufficient time and funds that would be required for such an undertaking. It is hoped that this study will be an aid to future researchers who attempt to obtain the support required for the major study recommended in this study.

In the remainder of this chapter the results of the pre-test are discussed. In the pre-test the questionnaire was sent out with a personalized letter and a followup as recommended in chapter 4. However, the budget was not sufficient to allow the sending of a followup postcard and additional followups, which is part of the recommended strategy and would have increased the response rate. Also, it was not an objective of the pre-test to determine if the recommended sample size was adequate. This was not feasible because of the cost involved, and would have been of little additional value to the sampling strategy as it is based on sound mathematical and sample theory.

In the period from September, 1974 to December, 1974 as part of this exploratory study, mail questionnaires were sent out to over six hundred subjects. Most of the guidelines recommended above were followed. One weakness of the research design was that full use was not made of followups. Nevertheless, the results are strong evidence of the value of the methodology recommended in this study.

Use of the computer was an important aspect of the pre-test. The computer was used for preparing personalized letters (this is not the contradiction in terms which it seems), preparing mailing labels, identifying the questionnaires and assisting in keeping track of followup and returns. This is in addition to the basic use of the computer for compiling the data received.

The Situation

The research design was influenced by the following factors. First of all, the population consisted of youth age 18 to 20 who left high school in 1971 or 1973. Secondly, the available addresses were one and three years old respectively. The questionnaires had twenty-one pages, and required, at a minimum, thirty minutes to fill out. Also, it was necessary to identify the respondents to allow followups, as well as for later examination of possible areas of bias. Finally, the sample consisted of over ten percent dropouts, a group less likely to respond to questionnaires.

The Covering Letter

The covering letter was believed to be of paramount importance, and accordingly much time was spent developing it. The covering letter¹ (see appendix) was designed first of all to give the respondent a sense of involvement in the research project. The subject's personal experience with school and work was emphasized, as was the value of their participation in the project. Through use of a computer program each subject received an original letter with their name and address typed on the letter. As well a point was made of placing their name in the body of the letter to increase the degree of personalization.

¹ Parts of the covering and followup letters were based on letters used by Project Talent, the University of Michigan's Youth in Transition Study, and the University of Minnesota's Youth Opinion Survey.

Also to improve their commitment to the project, the subjects were given the opportunity to submit their questions and suggestions on a separate form, and asked if they wanted a summary of the results.

The covering letter also emphasized the confidentiality of responses. As the questionnaire was identified by attaching to it a form which indicated whether the respondent wanted a copy of the final results this attachment was clearly marked "to be detached by research staff" (see appendix II). It was felt that this combination would minimize any fears the subjects had with respect to the anonymity and confidentiality of their responses.

Another important point mentioned in the covering letter was that an envelope was enclosed to enable the questionnaire to be mailed back at no cost to the respondent. Given the size of the questionnaire and the personalization of the covering letter it was felt that a business reply envelope would not be detrimental to the response rate (as opposed to a stamped return envelope).

Followups

One followup was sent out three to four weeks after the first mailing. This followup included a questionnaire, business reply envelope, and a new covering letter (see appendix III). The covering letter was personalized in the same way as the first covering letter, and covered the same points with respect to confidentiality. The main difference was that this letter emphasized the fact that the recipient had not been heard from yet and that this was the second attempt to do so.

Weaknesses in the Research Design

Given the previous review of the literature on mail questionnaires, the research design is optimal in all respects except one. A followup

postcard should have been sent out after both mailings of the questionnaire. This would, in essence, have meant three followups rather than only one. However, the incremental cost of the two additional followups would have been minimal because their postage rate is less, and because the increased response accruing from the first postcard reminder would reduce the size of subsequent mailings.

The Results

The results were extremely gratifying. Over 635 questionnaires were sent out. Out of those, 85 were returned as unforwardable (13%) or incorrectly addressed. Over 350 responses were obtained from the remainder giving a response rate of 64%. Given the size and dispersity of the population these results are at least comparable with that obtainable by other means, such as interviews. As well, this return rate would have been higher if postcard followups had been used.

The Use of Computers with Mail Questionnaires

A major cost in any large-scale research is incurred in the production, sending and receiving of postal material. By using computers the time required to produce personalized covering letters, mailing labels, and to maintain records of returns and followups is substantially reduced.

One master list was made of all subjects' names, addresses, and phone numbers. This information was simply typed in a free format on computer cards. From this list using programs written by the author and programs supplied by the University of British Columbia, all the items referred to in the preceding paragraph were produced.

The costs for using the computer in this respect were minimal, the major portion of the cost being that of paper (note that special forms were used to produce labels and 8-1/2 x 11 letters). The cost of each covering

letter including computer time was under three cents per letter.

Thus, through the use of a computer, it was possible to produce personalized covering letters and mailing labels at a cost comparable with that of producing a standard form letter. As well, the computer was used to keep track of respondents and produce from its master list, new mailing lists for followups.

Conclusion

Mail questionnaires have been shown to be effective. A twenty-three page questionnaire was sent out to a sample of high school graduates and dropouts using most of the methodology recommended in this study. A sixty-four percent response rate was achieved. Use of postcard followups would have increased this response rate substantially. Computer technology was used to facilitate the implementation of the methodology and the incremental cost was minimal. The mail questionnaire has been shown to be an excellent tool for gathering self-report data.

Summary of Exploratory Findings

Introduction

The purpose of the exploratory study was to develop and test a research design that would obtain statistically reliable information on how school prepares youth for the work world and provide an indication of how that preparation could be improved. While the project did include sending a rather extensive mail questionnaire to a sample of high school leavers, this was mainly to check the validity of the research design. The high response to the mail questionnaire and the reaction of the subjects

(see Prologue) showed the value of the research design. However, as we have emphasized throughout this paper, the pre-test itself was not done on a representative sample. The pre-test's main objective was to show that it was possible to obtain a high response rate from a sample of high school leavers, including dropouts.

Even though the responses to the questionnaire are not from a representative sample, a multivariate analysis of the results will be valuable as an indicator of the explanatory power of the attitude scales, and as a guide to further research.

Multivariate Analysis

A multiple regression was done with each of the satisfaction components of the Job Description Index (JDI) as the dependent variable. Independent variables included the following:

A. Work Attitudes

1. Meaning of work (MEANWK)
2. Self-development (SELDV)
3. Self-sufficiency (SELSUF)
4. Job involvement (TOTJOBIN)
5. Work ethic (WORKETHC)

B. Job Experience

1. Number of different full-time jobs since high school (EDUC07)

2. Time to find first full-time job (EDUC08)
3. Would you not work if given 'sufficient' income (GENER07)

C. Educational Background

1. How well did you do at school (SCHEXP01)
2. Last grade completed (GRADE)
3. Satisfaction with high school education (SCHEXP04)

D. Demographic Characteristics

1. Age
2. Sex
3. Marital status (MARRIED)

E. Self-Esteem

1. Self-esteem (RSLFESTM)

The Statistical Package for the Social Sciences (SPSS) forward stepwise procedure was used. Independent variables are included in the regressions equation only if they meet certain statistical criteria. The order of inclusion is determined by the relative contribution each variable makes to the explained variance.

For the purposes of this exploratory study, the statistical criteria was set so that variables were included only if the F ratio that would be obtained for that variable if it was brought into the equation exceeds 3.7. At that level the contribution that each variable made to the explained variance is significant at the .05 level ($d.f. = 160$).

The objectives of the regression analyses were two fold. First, to examine whether the variables studied accounted for a significant proportion of the variance in the job satisfaction measures. Second, to determine what contribution the work attitude, school experience and work experience variables made to the variance accounted for.

Summaries of each of the regressions are included in the appendix. In all cases the Multiple R was significant at the 95% confidence level and some of the attitude and work experience variables made a significant ($\text{sig} > .05$) contribution to the overall variance.

For discussion, it may be useful to look at the results of the regression analysis with work satisfaction as the dependent variable. The variables that have a significant effect on the regression equation account for over 23% ($\text{sig} > .01$) of the variation in satisfaction with work. Job involvement contributes the largest proportion of this variation with higher job involvement being related to a higher level of satisfaction with work. The work attitude variable "meaning of work" which includes statements such as "work is essentially hard and boring," with a higher score indicating the respondent disagreed with that statement, was the next most important variable. In this case the more the positive the attitude was to work, the lower was the satisfaction with work. This may imply that while one has a positive expectation of work, their current jobs was not meeting that expectation. The results also show that the longer it took to find a first full-time job the greater was the satisfaction with work. Two possible interpretations can be made of this finding. Possibly, those with a longer search period were more selective and were able to chose a job that meet their expectations. Alternatively, those who had a long

search period may have lowered their job expectations. Further research or analysis could pursue this question further. The results also indicate that the better one did at school, the higher their work satisfaction. Possibly, those with better grades had more options in the job market and were able to chose more satisfying jobs. Males are less satisfied with work than females. This may be due to work playing a more central part in a male's life (on the average) and therefore they have a higher level of expectations from the job. The discussion of these results are solely to give a rough indication of the effects of certain variables on job satisfaction. Further analysis and research, which is beyond the scope of this exploratory study, is required to give more definitive information. However, this initial discussion shows the potential information that could be obtained from the research proposed in this study.

While it would be possible to discuss the results in greater detail, it would be a misuse of them. The only purpose was to show the value of the proposed research. They may also aid future researchers but only as a guide to what questions should be investigated.

CONCLUSIONS AND RECOMMENDATIONS

The objectives of this study were to identify the need for research into youth work transition, to develop a research design for carrying out that research and to test the effectiveness of the research design. Now that those objectives have been met, the next step is for the research design to be used in a study that will investigate the problems of youth work transition and provide some of the information required by government and educators if they hope to solve this major social problem.

The pre-test indicated that a high response rate to a mail questionnaire can be obtained. It is therefore recommended that the mail questionnaire be used in future studies of youth work transition where it is necessary to reach youth over a large geographical region. When sending the mail questionnaire a personalized approach and followups, including a reminder postcard, should be used. The result will be a high response rate at a cost substantially less than would have resulted from the use of personal interviews.

Finally, it is hoped that with the groundwork laid by this study, future researchers will be able to obtain the funds and support that the problems of youth work transition warrant. Perhaps when these researchers present their reasons for support they should not stress what their research will accomplish, but ask what will happen if the research is not done.

REFERENCES

- Alderfer, C. and Dave Brown, "Designing an 'Emphatic Questionnaire' for Organizational Research," *Journal of Applied Psychology*, 1972, No. 6, 456-460.
- Bachman, J.G. et al., *Youth in Transition, Volume 1: Blueprint for a Longitudinal Study of Adolescent Boys*, Institute for Social Research, 1967.
- Bachman, J.G., et al., *Youth in Transition, Volume III: Dropping Out - Problem or Symptom*, Institute for Social Research, 1972.
- Berdie, Douglas R., "Questionnaire Length and Response Rate," *Journal of Applied Psychology*, Vol. 58, No. 2, 278-280.
- Breton, Raymond, *Social and Academic Factors in the Career Decisions of Canadian Youth*, Information Canada, 1972.
- Buckley, Helen, *Recent Canadian Experiences with Unemployment*, Canada Statistical Review, February, 1974.
- Burstein, M. et al., *Canadian Work Values*, department of Manpower and Immigration, 1975.
- Canadian Council of Social Development, *A Right to Opportunity*, 1972.
- Champion, Dean and Allan M. Sear, "Questionnaire Response Rate: A Methodological Analysis," *Social Forces*, 1969, Vol. 47, 335-339.
- Charach, Larry, "Using Mail Questionnaires: The Optimal Methodology," *Edge*, Jan.-Feb., 1976, 4-5.
- Davenport, Lawrence, "Career Guidance: A Call for Change," *Manpower*, November, 1972.

- Davidson, Terrence, N., *Youth in Transition, Volume 4: Evolution of a Strategy for Longitudinal Analysis of Survey Panel Data*, Institute for Social Research, 1972.
- Dennison, John D., A. Turner, G. Jones, G. Forrester, *The Impact of Community Colleges: a Study of the College Concept in British Columbia*, 1975.
- Department of Manpower and Immigration, *Youth Unemployment in Canada: A Detailed Analysis*, 1975.
- Dillman, Don A., "Increasing Mail Questionnaire Response in Large Samples of the General Public," *Public Opinion Quarterly*, 1972, 254-257.
- Dillman, Don A., and James H. Frey, "Contribution of Personalization to Mail Questionnaire Response as an Element of a Previously Tested Method," *Journal of Applied Psychology*, 1974, Vol. 59, No. 3, 297-301.
- Dillman, Don A., and James A. Christenson, "Increasing Mail Questionnaire Response: A Four State Comparison," *American Sociological Review*, 1974, Vol. 39, 744-756.
- Donald, Marjorie N., "Implication of Nonresponse for the Interpretation of Mail Questionnaire Data," *Public Opinion Quarterly*, 1960, Vol. 24, 99-114.
- Droege, Robert C. and Albert Crambert, "Followup Techniques in a Large-scale Test Validation Study," *Journal of Applied Psychology*, Vol. 49, No. 4, 253-256, 1965.
- Eckland, Bruce K., "Effects of Prodding to Increase Mail Back Returns," *Journal of Applied Psychology*, 1965, Vol. 49, No. 3, 165-169.
- Economic Council of Canada, *People and Job*, 1976.
- Educational Research Institute of British Columbia, *School Goal Study*, 1975.
- Flanagan, J.C., Dailey, J.T. and Orr, D.B., *The Talents of American Youth: Design for a Study of American Youth*, Vol. 1 (Boston: Houghton Mifflin, 1962).
- Flanagan, John C., and William Cooley, *Project Talent: One Year Follow-up Studies*, University of Pittsburgh, 1966.

- Flanagan, John C. and D. Russ-Eft, *An Empirical Study to Aid in Formulating Educational Goals*, American Institutes for Research, 1975.
- Fuller, Carol, "Effect of Anonymity on Return and Response Bias in a Mail Survey," *Journal of Applied Psychology*, 1974, Vol. 59, No. 3, 292-296.
- Hansen, M.H., W.N. Horwitz and W.G. Madow, *Sample Survey Methods and Theory*, New York: John Wiley and Sons, Vols. 1 and 11, 1953.
- Ginzberg, Eli, *The Development of Human Resources*, N.Y.: McGraw-Hill, 1966.
- Ginzberg, Eli, "Let's Cure Job Unreadiness," *Manpower*, February 1972.
- Goodman, P.S., J.H. Rose and J.E. Furcon, "Comparison of Motivational Antecedents of the Work Performance of Scientists and Engineers," *Journal of Applied Psychology*, 1970, Vol. 54, No. 6, pp. 491-495.
- Graen, George B. and Rene Dawis, *Minnesota Studies in Work Attitudes, Technical Report No. 2, Development and Administration of the Youth Opinion Questionnaire*.
- Guba, Egon G., *Educational Research, New Prospectives*, 1971.
- Heneman, Herbert G. and Rene Dawis, *Youth Unemployment: Frictions in the Threshold of the Work Career*, Final Report, Industrial Relation Center, University of Minnesota, 1968.
- Herman, M., S. Sadofsky and B. Rosenberg, *Work, Youth and Unemployment*, Thomas Y. Crowell Company, New York, 1968.
- Hodgson, J.D., "Speech before NAB National Youth Conference," 1972.
- Huck, Scuyler and Edwin Gleason, "Using Monetary Inducements to Increase Response Rates from Mailed Surveys: A Replication and Extension of Previous Research," *Journal of Applied Psychology*, 1973, 223-225.
- Imparato, Nicholas, "Relationship Between Porter's Need Satisfaction Questionnaire and the Job Description Index," *Journal of Applied Psychology*, 1972, Vol. 56, 397-405.
- Kephart, W. and Bessler, M., "Increasing the Response to Mail Questionnaires: A Research Study," *Public Opinion Quarterly*, 1958, 22, 123-132.
- Kish, Leslie, *Survey Sampling*, John Wiley & Sons, Ltd., 1965.

- Kish, Leslie, R. Groves and D. Krotki, *Sampling Errors in Fertility Survey*, International Statistical Institute, 1976.
- Klein, S.M. and John Maher, "Differences between Identified and Anonymous Subjects in Responding to an Industrial Opinion Survey," *Journal of Applied Psychology*, 1967, Vol. 51, No. 2, 152-165.
- Knowles, R., *Unemployment in Canada - A Structural Problem*, Department of Manpower and Immigration, 1973.
- Lansing, John B., G. Ginsberg and K. Broolm, *An Investigation of Response Errors*, University of Illinois, 1961.
- Lansing, John B. and James Morgan, *Economic Survey Methods*, Ann Arbor, Surrey Research Center, 1971.
- Lawler, E.E. III and D.T. Hall, "Relationship of Job Characteristics to Job Involvement, Satisfaction and Intrinsic Motivation," *Journal of Applied Psychology*, 1970, 54, 305-312.
- Li, L.V., *Causal Disaggregation of Unemployment: A Feasibility Study*, Department of Manpower and Immigration, 1973.
- Lodahl, T.M. and M. Kejner, "The Definition and Measurement of Job Involvement," *Journal of Applied Psychology*, 1965, 49, 240-243.
- Maceh, Albert and G. Miles, "IQ Survey and Mailed Questionnaire Response," *Journal of Applied Psychology*, 1975, Vol. 60, No. 2., 258-259.
- Matteson, Michael T., "Type of Transmittal Letter and Questionnaire Color as Two Variables Influencing Response Rates in a Mail Survey," *Journal of Applied Psychology*, 1973, No. 4, 535-536.
- Mitchell, V.F. and V. Baba, "Job Involvement and Central Life Interest," Unpublished manuscript, 1974.
- Nichols, R.C. and M. Meyer, "Timing Post Card Followups in Mail-Questionnaire Surveys," *Public Opinion Quarterly*, 306-307.
- Orr, D.B. and C. Neyman, "Considerations, Costs, and Returns in a Large-scale Followup Study," *The Journal of Educational Research*, Vol. 58, No. 8, 1965, 373-378.
- Parton, M., *Surveys, Polls and Samples*, Harper & Brothers, New York, 1950.

- Robin, Stanley, F., "A Procedure for Securing Returns to Mail Questionnaires," *Sociology and Social Research*, 1965, Vol. 50, 24-35.
- Robinson, John B., Athanasiou, Robert and Kendra B. Head, *Measurement of Occupation Attitudes and Occupational Characteristics*, Survey Research Center, 1969.
- Robinson, R. and Agism, P., "Making Mail Surveys More Reliable," *Journal of Marketing*, 1951, 15, 415-424.
- Rosenberg, M., *Society and the Adolescent Self-Image*, Princeton University Press, 1965.
- Smith, P.C., L.M. Kendall and C. Hulin, *The Measurement of Satisfaction in Work and Retirement*, Rand McNally, Chicago, 1969.
- Veiga, John F., "Getting the Mail Questionnaire Returns: Some Practical Research Considerations," *Journal of Applied Psychology*, No. 2, 1974, 217-218.
- Vietorisz, T., R. Mier and T. Giblin, "Subemployment: Exclusion and Inadequacy Indexes," *Monthly Labour Review*, May, 1975.
- Wallace, David, "A Case for and Against Mail Questionnaires," *Public Opinion Quarterly*, Spring, 1954, 123-132.
- Werker, J. and Ray Jones, *Obstacles to the Employment of Youth*, United Way of Vancouver, 1975.
- Wirtz, W., "Introduction by the Secretary of State," *Manpower Report of the President*, 1968, U.S. Department of Labour.
- World Fertility Survey, *Manual on Sample Design*, International Statistical Institute, 1975.

APPENDICES

- I Covering Letter Sent with Questionnaire
- II Attachment to Questionnaire
- III Followup Letter Sent to Non-respondents
- IV Questionnaire
- V Summary Tables for Multiple Regression Analysis

*
SAMPLE COVERING LETTER
OCCUPATIONAL RESEARCH PROJECT
Faculty Of Business Administration
The University Of British Columbia
Vancouver, B.C.

[illegible]

Jimmy Cricket

April 30, 1975

Dear Jimmy:

Did you find high school at times a waste of time? When you left school did you feel that perhaps you would have been better off with more job related subjects in school? How are you finding work now? Do you feel our society offers work positions that you are qualified for and offer you an interesting career? These and similar questions are currently being examined at the University of British Columbia. Part of the purpose of this study is to find out what difficulties people under 25 have in finding jobs, and how satisfying or dissatisfying these jobs are. Many people think they know the answer, but scarcely anyone has bothered to ask people who are part of the under 25 age group.

It is my hope that with your help we will be able to answer the above questions, and make some suggestions for improving the situation. The enclosed questionnaire which is easily completed in less than 30 minutes is aimed at finding out just what your work experience has been, your opinions about work and working, and something about you and your educational background.

Jimmy, it is very important that every person mailed this questionnaire help us, because there are no others who know so well the problems people your age must face.

You can be assured that all information obtained will be used only for research and held in the strictest confidence. You will not be identified in any way when we publish our findings.

Attached to the questionnaire is a form that will let us know if you would like a summary of our findings. If you wish a copy will be sent to you at our expense.

Perhaps in the years to come, through your assistance, we can make it possible for people to enter the world of work with less difficulty.

For the research staff,

Larry Charach
Director

SAMPLE ATTACHMENT TO QUESTIONNAIRE

to ?
 be |
 deta- |
 ched |
 by |
 research |
 staff |
 -----T

RETURN THIS PAGE WITH COMPLETED
 QUESTIONNAIRE IN THE PRE-ADDRESSED
 ENVELOPE (NO POSTAGE STAMP REQUIRED)

If you would like a complimentary copy of our research
 findings place a 'X' in the box. ☐

correct name and address below

Jimmy Cricket
 1234 Fantasy Land
 Disneyland, Calif. 9111

Suggestions And Questions _____

RESPONSES WILL BE KEPT COMPLETELY CONFIDENTIAL

TABLE 2. SAMPLE FOLLOWUP LETTER

✱ ✱ ✱ ✱ ✱ ✱ ✱

OCCUPATIONAL RESEARCH PROJECT

✱ ✱ ✱ ✱ ✱ ✱ ✱

Faculty Of Business Administration

The University of British Columbia

Vancouver, B.C.

✱

[illegible]

Jimny Cricket

April 30, 1975

Dear Jimmy:

Last month questionnaires were sent to a selected sample of people who were asked to assist in the Occupational Research Project being undertaken at the University of British Columbia.

As you recall part of the purpose of our study is to find out what difficulties people under 25 have in finding jobs, and how satisfying or dissatisfying these jobs are. It is our feeling that the best way to understand the above situation is to ask people who are part of the under 25 age group.

To date we have not heard from you, Jimmy. A major factor in determining the effectiveness of this project is your involvement through the questionnaire we sent you.

While a large majority of the people asked to assist us have responded, your response is very important and valuable to us. For our results to be accepted with confidence by the British Columbia Government and our other sponsoring agencies it is necessary that most of the people approached agree to cooperate in the research.

If you would fill out the enclosed questionnaire you would be making a valued contribution to this research and towards lessening some of the problems youth face in the world of work. If there is some reason why you prefer not to fill out the questionnaire would you then list on the back of this letter your reasons and send it back to us in the prepaid envelope enclosed with this letter.

You can be assured that all information obtained will be used only for research and held in the strictest confidence. You will not be identified in any way when we publish our findings.

Attached to the questionnaire is a form that will let us know if you would like a summary of our findings. If you wish a copy will be sent to you at our expense.

Perhaps in the years to come, through your assistance, we can make it possible for people to enter the world of work with less difficulty.

For the research staff,
Larry Charach
Director

APPENDIX IV

Questionnaire Used in Pre-Test

First, we would like to know how you feel about work and jobs.

DIRECTIONS

For each statement do the following:

- Read the statement carefully.
- Decide whether you agree or disagree with it.
- Decide how sure you are of your opinion.

If you agree with the statement and feel sure of your opinion, circle the point "Strongly Agree".

If you agree with the statement more than you disagree with it and feel somewhat unsure of your opinion, circle the point "Agree".

If you disagree with the statement more than you agree with it and feel somewhat unsure of your answer, circle the point "Disagree".

If you disagree with the statement and feel sure of your opinion, circle the point "Strongly Disagree".

Give your opinion about each statement.

Please give us your honest opinions. The only "right" answers are your honest opinions.

Work as rapidly as you can. Don't spend too much time on any one statement.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

(5) _____

1. Work is usually hard and boring.

strongly agree agree disagree strongly disagree

(6) _____

2. I'd rather work than do almost any other thing.

strongly agree agree disagree strongly disagree

(7) _____

3. Working in unfamiliar surroundings wouldn't bother me at all

strongly agree agree disagree strongly disagree

4. Work is the same hard grind whatever job you have.

strongly agree agree disagree strongly disagree

5. Few things can be more important than work

strongly agree agree disagree strongly disagree

6. I wouldn't mind taking a job far away from home, in a place I didn't know.

strongly agree agree disagree strongly disagree

7. Work is the most important part of life.

strongly agree agree disagree strongly disagree

8. Work is seldom enjoyable.

strongly agree agree disagree strongly disagree

9. Nothing would make me feel better than a good hard day's work.

strongly agree agree disagree strongly disagree

10. I wouldn't mind working in a company where I didn't know anybody.

strongly agree agree disagree strongly disagree

11. Work is usually unpleasant.

strongly agree agree disagree strongly disagree

PLEASE DO NOT
WRITE IN THIS
COLUMN.

(8) _____

(9) _____

(10) _____

(11) _____

(12) _____

(13) _____

(14) _____

(15) _____

PLEASE DO NOT
WRITE IN THIS
COLUMN.

- (16) _____
12. Nothing is more important to me than work.
- strongly agree agree disagree strongly disagree
- (17) _____
13. Working with strangers doesn't bother me.
- strongly agree agree disagree strongly disagree
- (18) _____
14. Work is rarely fun.
- strongly agree agree disagree strongly disagree
- (19) _____
15. Working in a company where I didn't know anyone would be okay with me.
- strongly agree agree disagree strongly disagree

The following are pairs of statements about work and jobs.

For each pair of statements do the following:

- Read each statement in the pair carefully.
- Decide which of the pair you prefer; statement a or b.
- Mark your choice by circling the letter next to your choice.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

- (20) _____
- IF YOU HAD THE CHOICE OF JOBS, WHICH WOULD YOU PREFER?
1. a. A job where I could continue to learn the rest of my life.
- OR b. A job which requires little thinking.
- (21) _____
2. a. A job where I could continue to learn the rest of my life.
- OR b. A job with short working hours.
- (22) _____
3. a. A job where I could continue to learn the rest of my life.
- OR b. A job which does not tie me down.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

4. a. A job where I could continue to learn the rest of my life.
- OR b. A job where I could solve problems no one else can.
- (23) _____
5. a. A job where I could not be fired
- OR b. A job where I could continue to learn the rest of my life.
- (24) _____

Now, this section is interested in how you see yourself

DIRECTIONS

For each statement do the following:

- Read the statement carefully.
- Decide whether you agree or disagree with it.
- Decide how sure you are of your opinion.

If you agree with the statement and feel sure of your opinion, circle the point "Strongly Agree".

If you agree with the statement more than you disagree with it and feel somewhat unsure of your opinion, circle the point "Agree".

If you disagree with the statement more than you agree with it and feel somewhat unsure of your answer, circle the point "Disagree".

If you disagree with the statement and feel sure of your opinion, circle the point "Strongly Disagree".

Give your opinion about each statement.

1. I feel that I'm a person of worth, at least an equal with others.
- strongly agree agree disagree strongly disagree
- (25) _____
2. I feel that I have a number of good qualities
- strongly agree agree disagree strongly disagree
- (26) _____

PLEASE DO NOT
WRITE IN THIS
COLUMN.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

3. All in all, I am inclined to feel that I am a failure.

strongly agree agree disagree strongly disagree

4. I am able to do things as well as most other people.

strongly agree agree disagree strongly disagree

5. I feel I do not have much to be proud of.

strongly agree agree disagree strongly disagree

6. I take a positive attitude towards myself.

strongly agree agree disagree strongly disagree

7. On the whole, I am satisfied with myself.

strongly agree agree disagree strongly disagree

8. I wish I could have more respect for myself.

strongly agree agree disagree strongly disagree

9. I certainly feel useless at times.

strongly agree agree disagree strongly disagree

10. At times I think I am no good at all.

strongly agree agree disagree strongly disagree

DIRECTIONS: Please be sure to answer every question below. Most of the questions can be answered by just circling the number to the left of the answer you choose. Do not skip any questions. Mark only one answer to each question except where instructed to mark more than one.

PART 1 - EDUCATION

1. Did you graduate from high school?
 1. Yes
 2. No
2. Have you attended college since leaving high school?
 1. Yes, as a full-time student.
 2. Yes, as a part-time student
 3. Yes, I entered but have dropped out temporarily.
 4. Yes, I entered but dropped out and do not plan to return.
 5. No, but I plan to enter college within a year or two.
 6. No, but I plan to enter college eventually; I have no idea when.
 7. No, and I have no plans to do so.
3. Since leaving high school have you attended a school other than a college?
 1. Yes, as a full-time student.
 2. Yes, as a part-time student.
 3. No, and I have no plans to do so.
 4. No, but I plan to get some more non-college schooling.
4. Which of the following kinds of school diploma or certificate do you plan to obtain? (Mark as many as apply.)
 1. No further schooling planned.
 2. A college degree (4 years or more of college).
 3. A junior college diploma or degree.
 4. R.N. (Registered Nurse Certificate)
 5. A business school or secretarial diploma.
 6. Diploma or certificate based upon apprenticeship training, on-the-job training, or technical or trade school. Please describe.

Question 4 continued on following page.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

(38) _____

7. CGA, CA or RIA diploma
8. Other. Please Specify: _____

5. What kinds of school have you attended since leaving high school? (Mark as many as apply).

1. None
2. A college offering bachelor's degree or higher.
3. A junior or community college.
4. A technical institute.
5. A business school.
6. Other. Please specify: _____

(39) _____

6. Answer this question if you have never attended college. Did you WANT to go to college?

NO

1. No, I had no interest in receiving further education.
2. No, I wanted to earn money.
3. No, I wanted to get married.
4. No, I was more interested in going to some other kind of school.
5. No, for some reason other than above. Please specify: _____

YES

1. Yes, but I couldn't afford it.
2. Yes, but I couldn't because of a family emergency.
3. Yes, but I couldn't because I was married.
4. Yes, but I wasn't qualified because I hadn't taken college preparatory courses required for admission.
5. Yes, but I didn't apply because my grades weren't good enough.
6. Yes, I applied but wasn't accepted.
7. Yes, but I didn't go for some other reason; Please specify: _____

(40) _____

7. How many different full-time jobs (35 hours per week) have you had since you left high school?

1. None
2. One
3. Two
4. Three or more.

*****if your answer to the above question was "None" please skip to Question 12, otherwise answer Questions 8 - 11.

*****Questions 8-11 refer to the FIRST full-time job you had after leaving high school. Include summer jobs or other temporary jobs you had after leaving high school, if they were full-time.*****

8. How long did it take you to find the first full-time job you had since high school?

1. I found it before I left high school.
2. Less than a week.
3. 1 to 2 weeks.
4. 2 to 4 weeks.
5. 1 to 2 months.
6. 2 to 4 months.
7. 4 to 6 months.
8. Longer than 6 months.

9. What was your starting pay (before deductions), on your FIRST full-time job? Fill in ONE of the lines below.

\$ _____ per week

OR

\$ _____ per month

10. What was your job called?

11. What did you do on this job?
Please be specific: _____

(41) _____

(42) _____

(43) _____

(44) _____

(45) _____

PLEASE DO NOT
WRITE IN THIS
COLUMN.

12. Did you have a paid job in May, 1974?
1. Yes, a full-time job (35 hours per week or more).
 2. Yes, part-time work (less than 35 hrs. per week).
 3. No, but I was looking for a full-time job.
 4. No, but I was looking for part-time work. (Did not want a full-time job).
 5. No, I was going to school, and did not want a job.
 6. No, I am a housewife, and was not looking for an outside job.
 7. No, I was not looking for a job for reasons other than those listed above.

*****Answer Questions 13 - 17 ONLY if you had a full-time job in May, 1974. Otherwise skip to Question 18.*****

13. What was your pay (before deductions), on this full-time job? Please fill in ONE of the lines below.

\$ _____ per month
OR
\$ _____ per hour

14. What is the job called?

15. Tell what you do (or did) on this job.
Please be specific: _____

16. How well do (or did) you like this type of work?

1. Very well.
2. Fairly well.
3. Not very well.
4. Not at all.

17. How long do you plan to stay in the same type of work?

1. I plan to make it my career.
2. At present I have no plans to change.
3. Probably a few years.
4. I plan to change soon.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

18. About how long were you unemployed (and looking for a full-time job) between June 1, 1973 and June 1, 1974?

1. I did not want a full-time job.
2. Not at all.
3. Less than a week.
4. 1 to 2 weeks.
5. 2 to 4 weeks.
6. 1 to 2 months.
7. 2 to 4 months.
8. 4 to 6 months.
9. More than 6 months.

19. What occupation do you expect to make your career?
Please be specific: _____

PART III - GENERAL QUESTIONS

20. What do you wish you had done differently in high school? Mark as many as apply.

1. I wish I had studied more.
2. I wish I had taken more college preparatory courses.
3. I wish I had taken more vocational work.
4. I wish I had had more social life.

21. Are you married?

1. Yes, I married while still in high school.
2. Yes, I married after leaving high school.
3. No.

If not, how soon do you expect to marry?

1. I plan to marry this year.
2. I plan to marry next year.
3. I plan to marry within 3 years.
4. I plan to marry sometime in the future.
5. I do not expect to marry.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

22. If you dropped out of high school without graduating, what was the reason?

1. To get a job.
2. I became ill.
3. I was needed at home.
4. I got married.
5. I did not like school.
6. I had failing grades.
7. I was asked to leave.
8. I left for some other reason. Please explain: _____

(55) _____

23. Where are you living at the present time?

1. At home with my parents or guardian.
2. Some other place.

(56) _____

24. Have you made any important decisions that you are sorry about now? (Mark as many as apply).

1. I am sorry I didn't go to college.
2. I am sorry I started college.
3. I am sorry about the kind of work I decided to do.
4. None of the above.

(57) _____

25. What program were you on when you finished high-school?

1. Academic-Technical
2. Commercial
3. Industrial
4. Community Services
5. Visual and Performing Arts
6. Other programs. Please specify: _____

(58) _____

26. Given the kind of work available to you, would you consider not working at all if given by some means an adequate sum of money each week?

1. No
2. Yes

If yes, how much would you consider adequate (after taxes)?

\$ _____ per week.

(59) _____

27. What was your age on May 1, 1974.

(60) _____

28. Sex:

1. Male
2. Female.

(61) _____

PART IV - HIGH SCHOOL COUNSELLING

29. Could students take tests from the guidance counsellor to help find out what jobs they were suited for?

1. Yes.
2. No.
3. Don't know.
4. There was no guidance counsellor in the school.

(62) _____

30. Did you ever take any of these tests?

1. Yes.
2. No.
3. Can't remember.
4. Tests not given in the school.

(63) _____

31. If you have taken such a test, did the guidance counsellor discuss the results with you afterwards?

1. Yes.
2. No.
3. Can't remember.
4. Have not taken such tests.

(64) _____

32. Did your school have a place where students could find books, magazines, and other information about different occupations?

1. Yes.
2. No.

(65) _____

33. How often did you look at such material?

1. Never.
2. Once.
3. Twice.
4. Three times.
5. Four or more times.
6. There was no such place in the school.

(66) _____

PLEASE DO NOT
WRITE IN THIS
COLUMN.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

34. Did you ever, on your own initiative, go to see the guidance counsellor to talk about any of the following topics?
(Mark as many spaces as apply).

1. School marks or grades.
2. Job plans when you finish your education.
3. Attending university.
4. Attending a post-secondary technical institute.
5. Attending business college.
6. Planning your high school program.
7. Leaving high school before finishing.
8. Some other topic.
9. Never went to guidance counsellor on my own initiative.
10. There was no guidance counsellor in the school.
11. Don't remember.

35. Were you ever called in by the guidance counsellor to discuss any of the following topics?
(Mark as many spaces as apply).

1. School marks or grades.
2. Discipline.
3. Job plans when you finished your education.
4. Attending university.
5. Attending post-secondary technical institute.
6. Attending business college.
7. Planning your high school programme.
8. Leaving high school before finishing.
9. Some other topic.
10. Never called in by guidance counsellor or there was no guidance counsellor in the school.
11. Can't remember.

36. Did you ever, on your own initiative, go to see a teacher or principal at the school (other than a guidance counsellor) to talk about any of the following topics?
(Mark as many spaces as apply).

1. School marks or grades.
2. Job plans when you finished your education.
3. Attending university.
4. Attending post-secondary technical institute.

5. Attending business college.
6. Planning your high school programme.
7. Leaving high school before finishing.
8. Some other topic.
9. Never went to see a teacher or principal on my own initiative.
10. Can't remember.

37. Where you ever called in by a teacher or principal at the school (other than a guidance counsellor) to discuss any of the following topics?
(Mark as many spaces as apply).

1. School marks or grades.
2. Discipline.
3. Job plans when you finished your education.
4. Attending university.
5. Attending post-secondary technical institute.
6. Attending business college.
7. Planning your high school programme.
8. Leaving high school before finishing.
9. Some other topic.
10. Never called in by a teacher or principal.
11. Can't remember.

38. What was your last grade completed?

(69) _____

(70) _____

(71) _____

112

PLEASE DO NOT
WRITE IN THIS
COLUMN

PART V - The Experience of School

39. Now, can you tell me about your past experience in school? How well have you done at school?

1. In most subjects you were average or above
2. In most subjects you were always average
3. In most subjects you were average or below
4. You usually did well but there were some bad periods of time
5. N/A

40. IF ALWAYS AVERAGE OR ABOVE:

In your opinion, what helped you most in keeping a good record at school?

1. Some of the teachers
2. The educational system
3. The family situation
4. Influence of your friends
5. Other reasons

41. IF BELOW AVERAGE OR BAD PERIODS OF TIME:

In your opinion, what contributed most to your usual or temporary poor record at school?

1. Some of the teachers
2. The educational system
3. The family situation
4. Influence of your friends
5. Yourself
6. Other reasons

42. How satisfied do you feel with the high school education you received?

1. Not satisfied
2. Satisfied
3. Very satisfied

IF YOU ARE CURRENTLY EMPLOYED PLEASE COMPLETE THE FOLLOWING SECTION, OTHERWISE GO TO PAGE 22.

PLEASE DO NOT
WRITE IN THIS
COLUMN.

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) 1

Now, we would like to know how you feel about your present job. Please circle the point on each of the following scales that best represents your feeling.

1. The major satisfaction in my life comes from my job.

strongly agree _____ strongly disagree

(6) _____

2. The most important things that happen to me involve my work.

strongly agree _____ strongly disagree

(7) _____

3. I am really a perfectionist as far as my work is concerned.

strongly agree _____ strongly disagree

(8) _____

4. I live, eat, and breathe my job.

strongly agree _____ strongly disagree

(9) _____

5. I am very much personally involved in my work.

strongly agree _____ strongly disagree

(10) _____

6. Most things in life are more important than work.

strongly agree _____ strongly disagree

(11) _____

7. Generally speaking, I am very satisfied with my job.

strongly agree _____ strongly disagree

(12) _____

PLEASE DO NOT
WRITE IN THIS
COLUMN.

To get into somewhat more detail, please think of your present work. What is it like most of the time? In the blank beside each word given below, write:

Y for "yes" if it describes your work

N for "no" if it does NOT describe it

? if you cannot decide

WORK ON PRESENT JOB --

(13)___	fascinating	___
(14)___	routine	___
(15)___	satisfying	___
(16)___	boring	___
(17)___	good	___
(18)___	creative	___
(19)___	respected	___
(20)___	hot	___
(21)___	pleasant	___
(22)___	useful	___
(23)___	tiresome	___
(24)___	healthful	___
(25)___	challenging	___
(26)___	on your feet	___
(27)___	frustrating	___
(28)___	simple	___
(29)___	endless	___
(30)___	gives a sense of accomplishment	___

Think of the kind of supervision that you get on your job. How well does each of the following words describe your supervisor?

In the blank beside each work below, put:

Y if it describes the supervision you get on your job

N if it does NOT describe it

? if you cannot decide

SUPERVISION ON PRESENT JOB --

asks my advice	___
hard to please	___
impolite	___
praises good work	___
tactful	___
influential	___
up-to-date	___
doesn't supervise enough	___
quick tempered	___
tells me where I stand	___
annoying	___
stubborn	___
knows job well	___
bad	___
intelligent	___
leaves me on my own	___
around when needed	___
lazy	___

PLEASE DO NOT
WRITE IN THIS
COLUMN.

(31)___
(32)___
(33)___
(34)___
(35)___
(36)___
(37)___
(38)___
(39)___
(40)___
(41)___
(42)___
(43)___
(44)___
(45)___
(46)___
(47)___
(48)___

PLEASE DO NOT
WRITE IN THIS
COLUMN.

Think of the pay you get now. How well does each of the following words describe your present pay? In the blank beside each word, put:

- Y if it describes your pay
N if it does NOT describe it
? if you cannot decide

PRESENT PAY --

9) _____	pay adequate for normal expenses	_____
0) _____	satisfactory profit sharing	_____
1) _____	barely live on pay	_____
2) _____	bad	_____
3) _____	pay provides luxuries	_____
4) _____	insecure	_____
5) _____	less than I deserve	_____
6) _____	highly paid	_____
7) _____	underpaid	_____

PLEASE DO NOT
WRITE IN THIS
COLUMN.

Think of the majority of the people that you work with now or the people you meet in connection with your work. How well does each of the following words describe these people? In the blank beside each word below, put:

- Y if it describes the people you work with
N if it does NOT describe them
? if you cannot decide

PEOPLE ON YOUR PRESENT JOB --

stimulating	_____	(58) _____
boring	_____	(59) _____
slow	_____	(60) _____
ambitious	_____	(61) _____
stupid	_____	(62) _____
responsible	_____	(63) _____
fast	_____	(64) _____
intelligent	_____	(65) _____
easy to make enemies	_____	(66) _____
talk too much	_____	(67) _____
smart	_____	(68) _____
lazy	_____	(69) _____
unpleasant	_____	(70) _____
no privacy	_____	(71) _____
active	_____	(72) _____
narrow interests	_____	(73) _____
loyal	_____	(74) _____
hard to meet	_____	(75) _____

PLEASE DO NOT
WRITE IN THIS
COLUMN.

Think of the opportunities for promotion that you have now. How well does each of the following words describe these? In the blank beside each word, put:

- (1) _____
(2) _____
(3) _____
(4) _____
(5) 2

Y for "yes" if it describes your opportunities for promotion

N for "no" if it does NOT describe them

? if you cannot decide

OPPORTUNITIES FOR PROMOTION --

- | | | |
|------------|----------------------------------|-------|
| (6) _____ | good opportunities for promotion | _____ |
| (7) _____ | opportunity somewhat limited | _____ |
| (8) _____ | promotion on ability | _____ |
| (9) _____ | dead-end job | _____ |
| (10) _____ | good chance for promotion | _____ |
| (11) _____ | unfair promotion policy | _____ |
| (12) _____ | infrequent promotions | _____ |
| (13) _____ | regular promotions | _____ |
| (14) _____ | fairly good chance for promotion | _____ |

Thank you for taking the time to further this study of youth. Your help is greatly appreciated and I would be pleased to answer any questions you have about this project and its results.

There is one final request I have of you that will help increase the value of this study.

WILL YOU ALLOW ME TO CONTACT YOUR PRESENT OR LAST EMPLOYER AND ASK THEM FOR AN EVALUATION OF YOUR PERFORMANCE?

Again, let me emphasize that all information received will be kept completely confidential.

Thank you for your co-operation.

☐ No, I would prefer you not to contact my employer.

☐ Yes, you can contact my employer.

Name of Employer _____
Address _____
City _____
My Supervisor _____

APPENDIX V

Summary Tables for Multiple Regression Analysis

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE.. TJDIWK

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
TOTJURIN	JOB INVOLVEMENT	0.34715	0.12051	0.12051	0.34715	0.4702658	0.27205
MEANWK	SCORE ON THE MEANING OF WORK SCALE	0.41190	0.16966	0.04915	-0.29042	-1.234480	-0.26131
EDUC08	TIME TO FIND FIRST FULL-TIME JOB	0.43452	0.18881	0.01915	0.18223	0.8669557	0.16061
SELSUF	LOWER SCORES INDICATE HIGHER SELF SUFFIC	0.44883	0.20145	0.01264	-0.03697	-0.3929626	-0.09408
SCHEAP01	HOW WELL DID YOU DO AT SCHOOL	0.46052	0.21208	0.01063	0.14904	1.479018	0.14675
SEX		0.47977	0.23018	0.01810	-0.03530	-3.526933	-0.14814
(CONSTANT)						30.58984	

MULTIPLE STEPWISE REGRESSIONS-SIGNIFICANT CONTRIBUTORS
JDI SATISFACTION WITH COWORKERS
FILE THESIS (CREATION DATE = 06/13/77)

06/29/77

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE.. TJDICW

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
SELDV	HIGHER SCORES INDICATE HIGHER SELF DEVEL	0.16006	0.02562	0.02562	0.16006	1.216131	0.16447
SELSUF	LOWER SCORES INDICATE HIGHER SELF SUFFIC	0.22663	0.05136	0.02574	0.14574	0.4437256	0.16839
EDUC07	DIFFERENT FULL-TIME JOBS SINCE HIGH SCHO	0.25474	0.06489	0.01353	-0.15025	-1.150915	-0.12447
SCHEAP01	HOW WELL DID YOU DO AT SCHOOL	0.27958	0.07816	0.01327	0.07527	0.8063350	0.17681
TOTJUBIN	JOB INVOLVEMENT	0.30130	0.09078	0.01262	-0.10270	-0.1239261	-0.11364
(CONSTANT)						22.81660	

MULTIPLE STEPWISE REGRESSIONS-SIGNIFICANT CONTRIBUTORS
JDI SATISFACTION WITH SUPERVISORS
FILE THESIS (CREATION DATE = 06/13/77)

06/29/77

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE.. TJDISUP

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EDUC08	TIME TO FIND FIRST FULL-TIME JOB	0.22217	0.04936	0.04936	0.22217	0.6520931	0.17985
DROPOUT		0.26462	0.07002	0.02066	-0.13360	-5.191763	-0.20769
EDUC07	DIFFERENT FULL-TIME JOBS SINCE HIGH SCHO	0.31738	0.10073	0.03071	0.15985	1.726784	0.17541
TOTJUBIN	JOB INVOLVEMENT	0.34028	0.11579	0.01506	0.13605	0.1451757	0.12504
RSLESTM	ROSENBERG SELF ESTEEM SCALE	0.35979	0.12945	0.01366	0.14042	0.7564761	0.11887
(CONSTANT)						10.33720	

FILE THESIS (CREATION DATE = 06/13/77)

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE.. TJDIIPAY

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EDUC08	TIME TO FIND FIRST FULL-TIME JOB	0.25032	0.06266	0.06266	0.25032	0.6138837	0.18183
GENE07	WOULD YOU NOT WORK GIVEN ADEQ INCOME-NO	0.30366	0.09221	0.02955	-0.20507	-1.773058	-0.11436
GRADE	LAST GRADE COMPLETED	0.33059	0.10929	0.01708	-0.17432	-5.539464	-0.30482
SCHEXP01	HOW WELL DID YOU DO AT SCHOOL	0.35765	0.12792	0.01862	-0.10297	-0.9683390	-0.15361
MEANWK	SCORE ON THE MEANING OF WORK SCALE	0.37549	0.14100	0.01308	-0.18755	-0.4093421	-0.13853
DROPOUT		0.39290	0.15437	0.01337	0.05417	-4.095906	-0.17596
(CONSTANT)						85.60964	

MULTIPLE STEPWISE REGRESSIONS-SIGNIFICANT CONTRIBUTORS

06/29/77

JDI SATISFACTION WITH PROMOTION

FILE THESIS (CREATION DATE = 06/13/77)

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE.. TJDIPRG

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EDUC08	TIME TO FIND FIRST FULL-TIME JOB	0.17709	0.03136	0.03136	-0.17709	-0.3680037	-0.17709
(CONSTANT)						16.12420	

MULTIPLE STEPWISE REGRESSIONS-SIGNIFICANT CONTRIBUTORS

06/29/77

TOTAL JDI SATISFACTION

FILE THESIS (CREATION DATE = 06/13/77)

***** MULTIPLE REGRESSION *****

DEPENDENT VARIABLE.. TOTJDI

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EDUC08	TIME TO FIND FIRST FULL-TIME JOB	0.26203	0.06866	0.06866	0.26203	2.283646	0.23674
MEANWK	SCORE ON THE MEANING OF WORK SCALE	0.33497	0.11220	0.04354	-0.23106	-1.914941	-0.22683
TOTJUBIN	JOB INVOLVEMENT	0.37348	0.13948	0.02728	0.22562	0.4554301	0.14744
SEX		0.40324	0.16260	0.02312	-0.08926	-3.195698	-0.19263
SCHEXP01	HOW WELL DID YOU DO AT SCHOOL	0.41639	0.17338	0.01078	0.07756	1.968425	0.10929
(CONSTANT)						109.6513	