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Relationship Between School Leavers' Career Development and Psychological Adjustment

A thesis presented in partial fulfilment of the requirements for
the degree of Master of Arts in Occupational Psychology
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Abstract

The school leaver's readiness to undertake successful steps toward the world of work was examined in the context of the changing occupational structure, secondary education provision, and the developmental implications of the prolongation of the period between school and work. The hypotheses that (a) the school leaver's level of career development would be related to the clarity of a career direction, and (b) the clarity of school leaver's career goals would be related to personal adjustment in the post-school environment, were tested over a two-week period with 157 school leavers undertaking an academic route toward the world of work. Established instruments were chosen to measure dimensions of effective career development and selected psychological well-being (life satisfaction) and personality variables (self-esteem, and locus of control), indicative of well-adjusted, mature behaviour. Additional issues relating to subjects' prior career guidance and exploration experiences and reasons for choosing their given post-school path were also examined.

Preliminary descriptive, reliability, and factor analyses of the established instruments yielded results consistent with theoretical expectations and with the results of previous research, providing support for the structural validity and internal consistency of the measurement for the present data. Direct discriminant function analyses were used to analyze the data relating to the research hypotheses, while research questions relating to additional issues were examined, in the context of subjects' decision status, using contingency analyses. Results of the subject's decision status revealed over half of the present sample were either unclear of a career direction or had not given any thought to the types of jobs they would like to do. For the present sample of school leavers, 56.7 per cent had chosen to continue on to higher education unaware of the occupational field for which their course will limit, and with little knowledge of their ability to adapt to the types of jobs for which they will eventually be qualified. Career development and career decision status was significantly related, supporting the first hypothesis. Those who were undecided about a career goal also lacked the attitudes, knowledge, and behaviours that both the developmental literature, and the objectives underlying career/transition education consider as necessary for successful movement into the world of work. Career decision status was found to be significantly related to life satisfaction and self-esteem. There was no support for the relationship of locus of control to career decidedness, providing only partial support for the second hypothesis, and suggesting that school leavers who chose a given post-school path with no clear career direction in mind are less likely to be satisfied with their lives, and less likely to feel self confident than school leavers undertaking a path with the intention of attaining a career goal. Results relating to additional research questions revealed that under half of the subjects who had received career/transition education during their secondary school years had found it to be useful in helping them to decide what to do on leaving school. The majority of subjects indicated that improvements needed to be made to the nature of career-related information available, that career advice required more professionalism, and that more work experience/exploration opportunities should be available during their secondary school years. Over half

indicated that the anticipation of job satisfaction was the main reason for undertaking higher education. For subjects who were decided about a career, a second main reason for attending university was to meet the requirements of a preferred job. For those who were undecided about a career direction, the desire to fulfil parental expectations rated second to the belief that higher qualifications will lead to job satisfaction, and a number also reported that they either did not know why they had undertaken further education or that they felt there was nothing else to do. Subjects who had undertaken higher education with no job in mind also reported parental expectations, in addition to the desire to continue learning as main reasons for attending university.

The implications of the present findings, for policy-makers, practitioners, and researchers in the field of career/transition education were discussed. Limitations of the present study were discussed in relevant sections of the study and these were summarised in the final chapter. Recommendations arising out of the research are offered and the importance of a more professional approach in the evaluation of the need, implementation, and impact of career development interventions in secondary schools is stressed.

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CHAPTER ONE

INTRODUCTION

One of the most critical stages in a person's career, both for the individual and for national economic and manpower planning, is the process of transition from school to work. Recent changes in the nature and availability of employment, coupled with the declining opportunities for youth in the labour market and the general upward shift in the level of education and training required to carry out the work that is available, has resulted in a more lengthy, uncertain, and drawn-out process than in past generations. Furthermore, the process of transition from school to work is also a modern day rite of passage for the young person, because entry into working life confers adult status, in many respects, in our society. Thus, the prolongation of the period between school and work also means that, the average young person in modern society, faces a longer period before assuming the responsibilities and authority associated with adulthood. It is, therefore, imperative that young people are prepared with the requisite knowledge and skills that will enable them to initiate purposeful steps toward the world of work.

While schools can neither provide the specific vocational (job) training required by our modern employment structure, nor thwart the most prevalent symptom of this structure, youth unemployment, they do have a critical role to play in assisting their students' acquisition of the knowledge, abilities, and attitudes that will enable them, on leaving school, to undertake informed action toward a meaningful, self-fulfilling, and successful position in the working world.

The later years of high school are particularly crucial in facilitating the young person's capacity to undertake effective steps toward the world of work. It is during these years in which many experiences and decisions related to post-high school transitions occur (Super & Hall, 1978). That high school students should engage in exploratory behaviour is a widely endorsed prescription among career development theorists and practitioners. Those who explore are thought to acquire the information about themselves and about the world of work that is necessary to engage in effective career decision-making and implementation behaviours (Grotevant, Cooper, & Kramer, 1986). Yet despite persistent interest, in New Zealand, in facilitating students' awareness of self and occupations during the high school years (Daley, 1990) not much is known about how well these interventions actually serve to facilitate adaptive career behaviour in the post-school environment.

Though the transition from school to work has become a popular research topic, and one on which much has been written (Korndorffer, 1987), there have been relatively few studies in New Zealand which have attempted to consider how well-prepared school leavers are to undertake effective steps toward entry into the world of work. On the contrary, there has been a tendency for research to concentrate on what high

school students want to do on leaving school, and the extent to which their job or career aspirations are influenced by, for instance, ethnic orientation, socioeconomic background, or educational attainment (for example, Lauder & Hughes, 1990; Nash, Harker, & Charters 1989). Such work has obviously contributed to our understanding of the educational and occupational implications for different groups of school leavers, and, incidentally, has provided valuable information for the formulation of equity policies. However, while such differences in aspirations are important, these demographic characteristics alone do not tell us the extent to which the student's resolve to undertake a given path on leaving school is part of a well informed decision, linked to future goals. Further, with an emphasis on exploring group differences, demographic variables provide little insight into how differences within groups exert themselves, or the implications of these differences for group members. The fact that young people will vary considerably in the planfulness of their approach to life, in their tendency to anticipate choices which they will have to make, in their exploration of alternatives, and in their tendency to acquire relevant information, suggests that educators also need data on these characteristics (Blustein, 1988; Holland, Power, & Gottfredson, 1980; Jordaan & Heyde, 1979; Lokan, Boss, & Patsula, 1982; Super & Overstreet, 1960). Researchers need this knowledge in evaluating programmes, and practitioners need information on these characteristics as a preliminary for planning and developing interventions.

While other investigations in the area have sought to ascertain young people's experiences in the post-school environment (Catherwood, 1985; Lauder, Khan, & McGlenn, 1988; Scott, Austin, & Mallard, 1985) these, too, are fraught with problems. Much of this work has been based on samples that were too small, atypical or geographically restricted to permit generally applicable conclusions. Moreover, such studies have tended to rely on the impressions of school personnel, vocational training tutors, youth workers, and the researcher(s) which, although invaluable in themselves, provide only a partial insight into the adaptive capacity of school leavers and are loaded with moral judgements and evaluations.

Such gaps and biases in our knowledge of the school leaver's progress along a given pathway is particularly difficult to understand, in part, because the past decade in New Zealand has seen a phenomenal increase in financial and human resources directed to the development of school-based transition education (Daley, 1990; New Zealand Government, 1988, 1989b). Given the present economic stringencies in our country as well, it is extremely difficult to understand why all of the emphasis has been on implementation and none on evaluation. That there is sustained interest in the need to provide young people both the access and the opportunity for full participation in adult working life is evident. The draft plan for the development of post-compulsory education and training in New Zealand (New Zealand Government, 1989b) highlights this concern. As resources continue to be committed to the expansion of programmes to facilitate students' capacity to move successfully toward the world of work, the need to monitor, evaluate, and research such efforts also increases. Given the mediocrity prevalent in the design and implementation of current provision in this area, such evaluation activity has become particularly urgent.

The process of transition from school to work is one of the crucial points in the socialisation process. As such, an understanding of the variables involved and the difficulties experienced is essential to anyone concerned with high school students' anticipatory coping with, and adjustment in, the post-school environment.

The present study was designed to examine school leavers' coping repertoire for making the prevocational and vocational decisions required by their psychological and social development, and the structure and content of our educational and occupational systems. An understanding of the degree to which school leavers possess the types of attitudes, knowledge, and behaviours characteristic of effective career development during the post-high school years (Super, 1957, 1963, 1983; Super & Jordaan, 1974) may help to clarify just how well-prepared these young people are to undertake successful steps toward entry into the world of work. A second aim of the present study was to examine the nature of the relationship between school leavers' career decidedness and aspects of psychological well-being and development that may provide information about the adjustive function of career development competence in the post-school environment. Given the value of exploration as an important stimulus for the development of attitudes, knowledge, and behaviours that facilitate effective career decision-making and career choice implementation behaviours (Harren, 1979; Holland, 1985; Jordaan, 1963; Stumpf et. al., 1983; Super, 1963), information about the nature of school leavers' prior exploratory activities would also seem important to a full understanding of their career development. The third aim of the present study then, was to sample the nature of exploratory behaviours recent school leavers' had engaged in prior to leaving school.

Given the above intentions, it is inevitable that the present study will be limited. The aim to examine the implications of school leavers' readiness for adjustment in the post-school environment, considers only one of a series of phases that could be included in the overall process of transition from school (Maizels, 1970). Very little is known about the main actors in the process, however, and it was anticipated that a focus on the school leaver as the unit of analysis would not only provide insight into a dimension that has received relatively little attention in past research in New Zealand, but also stimulate awareness of an area that should be seen to have an important role in future research.

As the social and psychological context of the contemporary New Zealand school leaver provides the background to the present study, this context is examined in detail before embarking on the central theme of the research. Chapter Two examines two key elements of the social context that have important implications for the school leaver's career development: (i) changes in the nature and availability of employment; and, (ii) the educational responses to preparing school students for movement into the post-school environment. Work provides an important stimulus for adult development and adjustment, and experiences within the secondary school context play an important mediating role in the young person's

capacity to begin to develop psychologically as a working adult. The links between the educational and occupational context are also examined within the context of the school leaver's life stage in order to fully conceptualise the consequences of school leavers' career choice competence for psychological adjustment in the post-school environment.

Chapter Three reviews the relevant literature examining dimensions of effective career development. Emphasis is given to studies which have examined the relationship of career maturity variables to outcomes in career decision-making, and to the influence of structured interventions in this process. The chapter also provides a summary of the literature relating personality and psychological well-being variables to career development, and attempts to ascertain conceptually, the consequences of school leavers' career choice competence for psychological adjustment in the post-school environment. The aims, hypotheses, and research questions addressed in the present study are summarised at the end of this chapter.

Chapter Four outlines the method used in the present study. Chapter Five provides the results relating to the preliminary analysis of the measures of career maturity and psychological adjustment that were included. This exercise was done to attain a peripheral objective: to examine the validity of the measures of career maturity and psychological adjustment used in the present study. Thus, Chapter Five summarises the results of principal components analyses carried out on the measures of career maturity and psychological adjustment at the scale level, and the discussion of these results in light of the extent to which the respective measures tap the constructs under investigation. The results of a principal components analysis carried out on the pool of items within each measure of career maturity and psychological adjustment are also reported, with a discussion of the relationship of the empirical structure of the measure for the present data, to theoretical expectations. Such information is considered important since, to this writer's knowledge, the established measures used in the present research (Appendix IIC, and III B) have not been applied to a New Zealand sample of school leavers before. With regard to the measures of career maturity, the instrument from which these scales are drawn are considered a significant development for measuring career maturity (Lokan, 1984; Punch & Sheridon, 1985), and hence, has important potential for both research and practice in New Zealand. In this context, it is hoped that the information provided in Chapter Five will contribute to knowledge of the instrument's measurement characteristics for future use in New Zealand, in addition to information about accuracy of the measurement for the present data. (The characteristics of these measures are described in detail in the relevant sections in Chapter Four). Chapter Six summarises the results relating to (i) the present samples' career exploration experience; (ii) the relationship of career maturity to the clarity of career goals; and (iii) the relationship of career decidedness to psychological well-being and development (psychological adjustment). Finally, Chapter Seven presents the summary and conclusions, along with recommendations, arising out of this study, for future research.

CHAPTER TWO

THE BACKGROUND TO THE STUDY

Introduction

This chapter provides a conceptual analysis of the background to the present study. In order to place into perspective the occupational context within which today's school leaver must cope, this chapter first considers New Zealand's changing occupational structure and the current climate of employment, before discussing the consequences of these trends for the types of knowledge and skills required of new entrants to the work force. A second theme of Chapter Two examines the educational responses to these trends with regard to issues relating to the practical task of facilitating the career-choice competence of its students. Although the aims and organisation of career/transition education in our schools are currently matters of some debate, many people involved still view the task as facilitating students' awareness of self and occupations (Department of Education, Transition Division, 1989). Also, as Super (1983) has pointed out, secondary schools are one aspect of the local community within which young people experience many of the interactions which influence their sense of self and their career development. Given the role of schools to stimulate, broaden, and provide a focus for the young person's exploration of self and environment, an assessment of the educational context is also important if the school leavers' current level of career development is to be understood. The present chapter concludes with an examination of the potential influence of the occupational and educational context to psychological development during the process of transition from school to work. Occupational and educational factors are linked to psychosocial development during late adolescence in an attempt to demonstrate the implications of school leavers' level of career development for psychological adjustment in the post-school environment.

2.1 The Changing Occupational Structure and the Current Climate of Employment

2.1.1 Youth Unemployment

Much of the concern about unemployment in New Zealand is focused on young people. Youth unemployment has risen faster than adult unemployment in recent years and is now at a substantially higher percentage rate. This gives rise to concern about the long-term effects on the social, psychological, and career development of individuals; as well as its more short-term effects on crime, delinquency, and social disorder.

Although industry and other restructuring policies post-1984 have increased youth unemployment in recent years (New Zealand Planning Council, 1989), young people have long borne a large part of the burden of overall unemployment. While at the 1986 Census the number of 15-19 year olds who described themselves as unemployed had risen to 20 per cent (New Zealand Official Year Book (New Zealand Official Year Book, 1988), this was from the already high level of 14 per cent at the time of the 1981 Census (NZOYB, 1984). Even in 1976 the rate of unemployment for this group was 6 per cent (NZOYB, 1984). As pointed out by Khan (1986), such statistics do not reveal the true extent of youth unemployment, in that, school-leavers and the 15-19 age group categories do not include those who are in temporary subsidised employment schemes.

The persistence of youth unemployment is also accompanied by an increasing period of time that individuals are unemployed. Between 1982 and 1988 for example, the proportion of young people under 20, registered unemployed for 26 weeks or longer almost doubled from 12.2 per cent to 21.4 per cent (New Zealand Planning Council, 1989).

Even though there has been a levelling-off (and some may even argue, an actual decline) in the ratio of youth to adult unemployment, an analysis of labour market trends included in a recent report by the Economic Monitoring Group (NZPC, 1989) suggests there is little reason for optimism. First, young people continue to share a major part of the burden of overall unemployment. In March 1989, almost 50 per cent of the total unemployed in New Zealand were under the age of 25 with almost 60 per cent comprising those within the 15-19 year old age group. Secondly, an apparent decrease in the level of youth unemployment (from 35 per cent of the total in March 1986 to just under 30 per cent in March 1989) reflects rising adult jobless rates rather than falling youth unemployment rates. Thirdly, the narrowing gap is mainly the result of the changing structure of the working age population (NZPC, 1989).

A number of studies have examined the consequences of unemployment to the psychological health and social stability of young people. Interviews by Bethune and Ballard (1986) with a group of 50 Dunedin unemployed school leavers revealed an increasing tendency to feel bored, apathetic, and insecure the longer joblessness continued. When asked how they spent their time on a typical day, almost half of Bethune and Ballard's sample could name no other activity apart from housework or watching television. Fifty-four percent, likewise, claimed to spend all or most of their time alone, 70 percent blamed unemployment on their own personal deficiencies, and 78 percent felt bored, frustrated and angry. Similarly, Nash (1981) noted a higher incidence of petty crime and drug-taking in unemployed young people, as well as "restlessness, apathy, hopelessness, lowered sense of self-worth, lack of self-confidence, and a loss of trust in the system" (p3).

The results of longitudinal studies of unemployed adolescents in Australia also show that there is likely to be prolonged adverse psychological consequences to being unable to secure a job. Studies by Tiggeman and Winefield (1981, 1984; cited in Peterson, 1989) have found that adolescents who differed relatively little while still at school became markedly different after several months of being either employed or unemployed. Six months after leaving school, the unemployed in their sample reported more feelings of boredom and loneliness, less satisfaction with themselves, and less happiness with life in general than those who had left school at the same time and were employed. After 12 months of being unemployed, the young people in Tiggeman and Winefield's sample were found to be more depressed, less well adjusted, and lower in self-esteem than their employed peers.

The debate about the causes of unemployment, the possible solutions, and the implications for youth policy, has been comprehensive. At the very least, there seems to be a consensus that structural changes in employment practices and work organisations, partly resulting from the introduction of new technology, have significantly exacerbated the effects of economic recession. That said, it remains true that youth unemployment is far too high, and that prolonged periods of unemployment for a sizeable proportion of young people can be both emotionally and socially damaging, and may even disadvantage those affected, for the remainder of their lifetime.

The transition from school to work is a much more complex undertaking than has been the case for earlier generations. Many young people experience frustration of their ambitions to move out of high school and into the paid workforce. It is, thus, more important than ever that young people are equipped with the knowledge, abilities, and attitudes that will enable them to overcome not only the immediate problems they may face on leaving school, but will also provide them with enduring resources to face future problems. An analysis of economic and labour market trends in other Organisation for Economic Co-operation and Development countries (Coleman & Husen, 1985) has suggested that it is not unrealistic to accept a future where intermittent periods of unemployment will be a necessary feature of employment, at least at lower levels of entry and training. It is also increasingly probable, that, having entered a particular occupation at whatever level, there will be a variety of subsequent choices and transitions to make concerning training and specialisation, and even mid-career transfer to an entirely different type of work (Coleman & Husen, 1985).

Many of the problems confronting school leavers, in their efforts to undertake steps toward the world of work, stem from a complex interaction of economic, demographic, and social forces. Some of these trends are examined in the next section, including the structural moves in the framework of employment and accompanying changes in our traditional and current work requirements and patterns.

2.1.2 Changes in the Occupational Structure

Confronting New Zealand society are changes of colossal proportions for which there is evidence that these have been gaining momentum for fifteen years or more. The changes taking place are linked to equally dramatic changes that have been occurring simultaneously throughout the industrialised world - changes in the balance of power, changes in the world economy and in trading patterns, changes in technology, and changes in life styles.

The term 'post-industrial society' is often used to define this period because the change in the nature of work is the most obvious feature. A common theme running through labour market projections is that of an emerging 'information and knowledge' based society, in which theoretical knowledge and research techniques are valued as crucial expedients (Haines & Callister, 1989). In discussing the nature of change confronting the New Zealand labour market, one economist referred to the 'Information Revolution' to draw attention to the role of information technology in post-industrial society, just as machine technology was the central feature of industrial society (Burton, 1988).

In a book entitled "The Future of Work", Handy (1984) describes the direction of some of the new patterns of work emerging in Britain during the early 1980's:

- the full-employment society was becoming the part-time society;
- 'labour' and 'manual' skills were yielding to 'knowledge' as the basis for new business and new work;
- 'industry' was declining and 'services' were growing in importance;
- 'hierarchies' and 'bureaucracies' were going out, 'networks' and 'partnerships' were coming in;
- the one-organisation career was becoming rarer, job-mobility and career changes more fashionable;
- sexual stereotypes were being challenged, at work and in the home, and sex roles were no longer rigid;
- work was shifting southwards, inside counties and between counties;

Although it may be argued that this only deals with the situation in Britain, the New Zealand situation is not dissimilar. As we have become a trading nation during the past 15-20 years, and especially since deregulation, there has been a marked shift in sectoral patterns of employment, falling in the primary and manufacturing sectors, and rising in the tertiary sector. While primary production and manufacturing have expanded through diversification of land-use and in-depth processing, more capital intensive methods and specialisation have displaced many of those formerly employed in these areas. Over the 1977/78 to 1987/88 period, employment in the primary sector fell substantially from 164,000 to 145,000, a decline of 11.5 per

cent. In the manufacturing sector, too, employment fell from 292,000 to 270,000, a decline of over 9.0 per cent over the ten year period. In the service sector, by comparison, this period saw a strong growth in employment from 845,000 to 956,000, representing an increase of 13 per cent (NZPC, 1989). Within this sector, employment increases have been greatest amongst three groups in particular - in the personal and social service group the period from 1977/78 to 1987/88 saw an increase of over 40,000 jobs; in the business service group, of 45,000 jobs; and a growth of almost 40,000 jobs mainly associated with trade, restaurants, and hotels. According to a recent forecast by the New Zealand Planning Council (Haines & Callister, 1989) about 70 per cent of new jobs during the 1990's will be in the service sector. This proportion represents increased business activities associated with our produced goods - in such areas as design, further processing, accounting, marketing, administration, banking, and advertising - as well as the development of new activities such as tourism, leisure, and communication.

In addition to employment shifts between industries, Haines et al point out that a particularly striking trend in employment patterns has been the phenomenal growth of non-manual relative to manual occupations - across all sectors. Haines et al define manual workers as "often highly skilled, their skills based in large part on their physical abilities" (p15). Some examples of manual workers are farmers, plumbers, painters, carpenters, miners, forestry workers, drivers, and most factory workers. 'Non-manual' workers are seen by Haines et al as "a mixed bag - they are often highly skilled but with different kinds of skills from manual workers" (p 15). Examples of non-manual workers are salespersons, typists, managers, scientists, teachers, cooks, journalists, and hairdressers.

Between 1976 and 1986 the proportion of people working in manual jobs in the primary sector decreased dramatically, down from 34 per cent, over a third, to 23 per cent, under a quarter. Over the same time the proportion of people working in non-manual jobs in the service sector increased to well over a half, from 46 per cent to 56 per cent (NZPC, 1989). Of these, the most rapidly growing jobs have been in professional, technical, administrative, managerial, and clerical and related occupations.

The 1980's have also seen a marked increase, across all sectors, in the number of self-employed people working on their own or in small business mainly associated with trade, restaurants and hotels, and business services; and in the tertiary sector in particular, part-time work has assumed an increasingly salient component, most notably, in trade, and the community and personal services sector where most growth in jobs has occurred, with a smaller number in manufacturing. According to Clark (1986) over the 1966 to 1981 period, there was an increase of 198 per cent in the part-time labour force, compared with a 26 per cent increase in the full-time labour force during the same period. This growth brought New Zealand, in 1981, to a point where just over 13 per cent of the workforce was part-time (Clarke, 1986). Throughout the 1980's, part-time employment has continued to increase, although at a much slower rate. In February 1983, for example, part-time workers comprised 15.4 per cent of the workforce; by February

1988, this had grown to 18.4 per cent (NZPC, July, 1989). According to Clarke, the increase in part-time employment has made more job opportunities available to those with other commitments such as home duties, child care, or post-compulsory education, and to those who seek part-time rather than full-time work.

While these shifts are partly a response to recent restructuring moves, they also represent a working-out of longer term trends. For example, the increase in the self-employed has been linked to the growth of administrative and managerial jobs (NZPC, 1989), and also to the decentralisation process (Clarke, 1986). Much of the growth in part-time work during the past decade is, in part, due to the development of the personal and social service industry. The increasing concentration of employment in the service sector, in general, and changing technology both help to explain the slower growth of predominantly manual jobs and the more rapid growth of non-manual jobs.

2.1.3 Implications for Preparation of New Entrants to the World of Work

The structural changes outlined above (which take into account only the major trends) coupled with new technology and increasing complexity of jobs have particular consequences for the types of knowledge and skills required to adapt and to adjust successfully to the world of work. For example, jobs in the service sector are characterised by a high level of contact with customers. In the restaurants/hotels area much contact will be with overseas tourists - communication/interpersonal skills and often language skills are therefore important. In the area of finance/insurance and business service, information, technological, computing, and number skills are all in high demand. Within the service sector, high levels of self-employment also indicate the need for a good basic level of business and managerial skills.

Haines et.al. (1989) provide a list of 8 generic skills increasingly needed in all areas of the workforce:

- ability to continue learning/adapting throughout life;
- communication/interpersonal skills;
- information skills;
- business/management skills;
- technology/computer skills;
- language skills;
- thinking/creative/problem solving;
- number skills;

Haines et. al. add that different groups argue for dramatic improvement in the levels of specialist skills, such as science and mathematics in emerging high technology industries but they stress, for New Zealand as a whole to be successful in the new economy, everyone needs to lift their level of base generic skills.

With respect to young people, these trends illuminate at least three important components of preparation for the transition from school. First, the 'hi-tech' information society imposes high minimum levels of literacy and numeracy. Widespread understanding of technology and scientific thinking are also necessary within modern society. In training people to manipulate technology, it is essential that they grasp its underlying principles. An adequate standard of communication, reasoning, and numeracy underlie most occupations, and demonstrated competence will continue to dominate entry level requirements as structural changes in the labour market further reduce the supply of jobs requiring few, if any, formal qualifications, and technological advances continue the demand for educatable (and therefore, trainable) manpower.

A number of writers have recently expressed concern about the skill-level of New Zealand's workforce, as measured in terms of formal educational qualifications (Haines & Callister, 1989; New Zealand Employers Federation, 1981; NZPC, 1989; New Zealand Government, 1989a; Scott, Austin, & Mallard, 1985). For example, of the total labour force, over 700,000 (45 per cent) lack any formal school qualification (NZPC, 1989). Another 275,000 (24 per cent) have qualified in one or more School Certificate Subjects and have finished formal schooling at ages 15 or 16 (NZPC, 1989). In total, more than two-thirds of the workforce have not progressed beyond the School Certificate stage in the formal education system. The pattern of tertiary qualifications (including apprenticeships) is similar. Sixty per cent of all workers in New Zealand currently have no tertiary qualification (NZPC, 1989).

The NZPC add that although the level of educational attainment is higher for younger age groups, there is still reason for concern about the educational attainment of New Zealand's young people and the future workforce. This issue is discussed in considerable detail by Haines et. al. (1989). They point out that, despite a considerable improvement in participation rates over the last couple of years, at ages 16 to 18, New Zealand falls far behind most other OECD countries, surpassing only Turkey and Greece: "In 1988 over 20 per cent of New Zealand 16 year olds were out of the education system, by age 17 nearly 50 per cent were no longer in a formal learning situation and by age 18 years only one-third were left. Meanwhile, the vast majority of German, Japanese, Swiss, American (and even Australian) teenagers were still being trained, potentially moving further ahead in terms of gaining work-related skills (and possibly general life-skills)" (p22). Although there are always problems with international comparability, a similar comparison of OECD countries by gross domestic product per head places New Zealand in a position similar to that of its performance in education participation and attainment rates (Haines et al, 1989).

The decline, in recent years, of job opportunities traditionally available to young people entering the workforce affect all new entrants, but particularly those lacking useable and marketable qualifications. Indeed, numerous studies have provided support for a definite link between level of unemployment and educational qualifications (for example, Daly, 1985; OECD, 1984; Tiggemann & Winefield, 1989). In an analysis of unemployment trends across member countries, the OECD (1984) concluded that "while these figures reveal an increase in the unemployment rates among highly-qualified young people, they equally show that, in general, the longer the duration of formal studies the lower are the risks of unemployment" (p35).

At the same time, frequent and widespread shifts in both the supply of, and demand for particular groups of workers require that those entering the workforce do so with a perspective of change and adaptation built in. They need to be able to accept a future that is likely to bring about a number of changes of jobs, of periods for upgrading skills or developing new ones. An engineer, for example, will need to continue learning to use new material or new computer-assisted design techniques, while shop assistants need to be constantly learning about the new products passing through their shops. Haines et. al. cite an example that illustrates the full complexity of this theme:

"The difficulty is that the half-life of people's knowledge is contracting so fast that it now almost equals the time taken to acquire it. Take an electronics engineer or computer scientist graduating in the summer of 1987. Whether from Caltech, Stuttgart, or Tokyo, half the knowledge he (or increasingly, she) has acquired over the past four years at university will be 'old hat' by 1992. The engineer will then have to go back for 'repotting' if the employer is serious about keeping abreast of competitors" (Haines et. al., 1989, p12).

A second component of preparation for the post-school environment then, is the acquisition of relevant affective skills that, essentially, provide a sound foundation from which to cope successfully with such important career decisions both in the short- and the long-term.

A final component is the important role of decision making. Since it is both likely and acceptable for today's school leaver to change their career direction a number of times during their lifetime, competence in the decision-making process itself is a vital skill if these career changes are to be purposeful.

The general career decision-making model is a system, with inputs, processes, and outputs. The inputs are personal information (aptitudes, skills, interest, and values) and career information (knowledge of a variety of career options), and the output is a career plan (including a goal, and also plans for achieving it). Thus, decision-making skills are defined as those associated with the process of integrating personal information with career information in arriving at career plans. More often, though, they are defined broadly to include the skills of gathering the inputs into the system, of becoming 'self-aware' and 'career knowledgeable' (Harren, 1977; Holland, 1985; Super, 1957, 1963, 1983; Super & Jordaan, 1974). Engaging in the decision-making process repeatedly during one's lifetime would make little sense without updating the inputs, which include feedback in the form of outcomes of previous career plans. As they are taught

and measured, decision-making skills also include attitudes and beliefs associated with decisions to make career decisions, such as appreciation of the importance of planning ahead, willingness to make one's own decisions rather than to succumb to external pressures, belief in control over one's own life, and willingness to reassess prior decisions and to reverse them when the situation warrants (for example, Krumboltz, Hamel, & Scherba, 1982).

Today, the prospects for young school leavers, both psychologically and socially, and whether intending to enter the workforce directly or to go on first to further education, are negligible without having acquired a clear sense of self to know whether their career decisions are wise and valuable ones, or having acquired enough sense to know which tack to take should the tides of employment suddenly change direction. In the wake of rapidly changing patterns of working life, the need to make ongoing decisions in a rational and perceptive manner is imperative.

The emerging labour market conditions - decreasing volume, increasing complexity, and rising entry standards draw specific attention to the need to adequately prepare young people for the transition from school. One of the most important aims for secondary education should be to provide all students with the knowledge, ability and attitudes which will enable them to avail themselves of all opportunities for educational, personal, and career development. This chapter continues with an examination of educational responses to changes in the world of work, followed by a brief appraisal of these responses, before looking at the role these factors may play in mediating adaptive behaviour during the process of transition from school to work.

2.2 Current Educational Provision

2.2.1 Upper-Secondary Education Provision

In July 1984, when the Labour Government, under David Lange, came into office, the call for reassessment of the role of schools in preparing their students for transition to the post-school environment had already become a burning issue and the focus of much government and public debate. Much of the discussion centred on the weakened position of young people in the labour market and, in particular, the concern that among some segments of the youth population increasing numbers faced the likelihood of being marginalised. The analysis which underscored much of the debate assumed a deficiency in both young people and the schools charged with their education. Young people were assumed deficient because they lacked the necessary skills and the appropriate work experience and the habits of mind to go with it to survive in the rapidly changing labour market (Scott, Austin, & Mallard, 1985). Schools were assumed

deficient because they did not provide for the development of the full range of attributes necessary for the young person to participate competently in the modern employment scene (Scott, et. al., 1985).

A common theme running through much of the discussion that contributed to the re-organisation of upper-secondary education was the generally acknowledged need to reconcile the aim of academic excellence, as exemplified in the traditional classical education, with the needs and interests of an increasing clientele for whom schooling beyond the compulsory level had become the norm (Scott et. al., 1985; Catherwood, 1985; Marshall, 1987). This view held that the structure and content of upper-secondary programmes, with their emphasis on academic values and styles, produced gross inequalities between a small elite who succeeded, and the majority who did not.

The issue of upper-secondary provision was taken up by the newly elected Labour Government toward the end of 1984 and culminated, in the release in April 1987, of *The Curriculum Review, the Report of the Committee to Review the Curriculum for Schools*. Broadly, the 1987 report endorsed the provision of a more integrated curriculum and corresponding increase in the breadth of subjects; the provision for optional courses of study, including multi-level study, and 'alternative' programmes to be integrated into mainstream curricula; new forms of student assessment, such as continuous (internal) assessment, and profiling as an option to formal external assessment. The result was to be a far more flexible system, which avoided early specialisation, and offered students a wider choice of alternatives.

The emphasis is increasingly upon keeping the doors to continuing study open for longer and to a much wider group of young people (Hawke, 1988). In addition, more attention is being paid to technical, scientific, and vocational education (this latter, through "links" with other post-compulsory education and training institutions, most notably, with polytechnics and with ACCESS) so that choices after Year 4 and on leaving school are also greater (Rivers, Lynch, & Irving, 1989).

At the centre of all these changes, career education must play an integral part in helping students to make a wise choice amongst a variety of complex choices. The emerging emphasis on diversity and flexibility of choice conceives of the young person as moving through the education system along a variety of pathways which have differing points of entrance to, and implications for adjustment in, the work system. This, in turn, highlights the importance of the young person having the knowledge and the skills which will enable him or her to choose as freely as possible among the opportunities available. School leavers, in justice to themselves, should be aware of the options available in the post-school environment; they should look ahead to a variety of choices in curricula offered by different types of education and training institutions, and leading to differing career paths. A main function of educational and career guidance in the school, and of career education at any level, is the development of an adequate awareness of existing options, of discriminating preferences consonant with needs and the realities of the occupational structure,

and of executing plans by which these preferences can be implemented. It maintains that all school leavers, regardless of the ultimate goal they pursue beyond school, need to be helped to find purpose in what they are doing and considered ways for meeting these purposes. The framework within which career education operates in the New Zealand secondary education system is called 'Transition Education'. The following section therefore, deals with Transition Education, the importance of which is beginning to be recognised in our schools.

2.2.2 Transition Education

Alongside the development and diversification of upper-level secondary education, Transition Education has emerged to assume an increasingly important role in assisting students to relate their educational experiences to future career options and benefits. The term 'transition' to indicate "the progression from adolescent, dependant, school life, to adult, independent, working life" (Khan, 1986, p1) includes a range of educational experiences - for example, the infusion of information about the world of work into curriculum subjects, educational and career guidance and counselling, work exploration, work shadowing, pre-employment training (including work experience, and block-courses through polytechnics and ACCESS-based programmes) and 'social' and 'life skills' (Department of Education, Transition Division, 1989). In other countries, such as in the United States, and Britain (Watts and Herr, 1976), Canada, and Australia (Lokan, 1984), Sweden, Israel, and the Soviet Union (Goldhammer and Taylor, 1972) similar approaches to facilitate the process of preparation for, and adjustment to, the post-school environment are embraced by the term 'Career Education'.

Perceived largely, during the early 1980s, as a means to improve insertion into the labour market of those whom school authorities considered "at risk" to unemployment (Scott et. al., 1985), the Transition Education movement has emerged, alongside rapidly rising youth unemployment and associated changes in the framework of employment, to assume a central role in the process of preparing all students for the transition from school. In a letter to secondary school Principals in December 1987, the Associate Minister of Education announced that "Transition Programmes should be seen to be part of the curriculum for every student where appropriate, as well as positive assistance to those in special need" (Lauder, Khan, & McGlinn, 1988, p26). Transition programmes were to be allocated an estimated 2.6 million in the following year, with a further 13.7 million in 1989. The specific purpose for the additional funding was two-fold. Firstly, to enable schools to develop transition programmes, adapted to local conditions, to meet the needs of their students (and of "disadvantaged" students in particular); and secondly, to provide for teaching and ancillary staffing to help students identify career choices, and for this purpose, to refurbish some buildings. The general criteria for which such funding was to be allocated involved programmes "developed by schools which feature initiatives for disadvantaged groups and an emphasis on personal

development, including the development of initiatives and the ability to face and solve problems" (Education Gazette, 1988; cited in Lauder, Khan, and McGlinn, 1988, p 26-27).

A decade of school reform under the Transition Education banner has seen activity at practically all levels of secondary schooling in New Zealand. The decade has also seen political intent evolve from contemplating the possibilities of the concept of transition education to implementing transition education as a promising educational approach. This shift from development to implementation carries with it the assumption that transition education has completed the conceptual challenge of linking education to personal development (with its focus of the school curriculum), and that it has answered the questions it posed for itself as to how to facilitate the school leavers' capacity to undertake effective steps toward the world of work. If true, what remains for transition education is the refinement and dissemination of these answers. The following section, therefore, examines the relative effectiveness of current changes in secondary education provision in facilitating the transition from school to work.

2.2.3 Issues in Upper-Secondary Education and Transition Education Provision

Despite massive state expenditure on the transition education enterprise during the past half decade, notwithstanding the overall changes which have been made throughout upper-secondary education to prepare students for transition to the post-school environment, relatively little is known today about the practical short-term and long-range consequences of this substantive effort. Even though recommendations to monitor and to evaluate have been written into the objectives of most planned changes (for example, Department of Education, Transition Division, 1989), a notable feature of many of these methods is the preoccupation with what is, in effect, book-keeping: the focus being largely confined to the immediate objectives of current educational policy itself, albeit, to destination information. Thus, the national evaluation of Transition Education, and therefore, the criteria upon which funds for developing programmes are based, rests exclusively on demographic data (see Department of Education, Transition Division, 1989, Appendix 12). Ironically, the goals and objectives upon which much of the direction in current curriculum development are based, seem to be concerned with those outcomes for which very little evidence has been gathered. Among others, these include increased awareness of opportunities, competence in decision-making, and transition and work-adjustment skills (Hawke, 1988). To the extent that participation in education and training is encouraged through such incentives as financial assistance (New Zealand Government, 1989b), a restriction in the focus of outcome information to data of who goes where necessarily obscures feedback on such outcomes as whether an individual's employment potential really has been changed, or if significant secondary effects have occurred.

It is, indeed, a matter for concern as to whether the ideals behind the comprehensive reforms, relating to more equal opportunities by means of wider curriculum choice, are anywhere near to realisation when so many students appear ill-informed about the choices available to them. For example, recent data from a nationwide survey of upper-secondary school students' aspirations and intentions (Rivers, Lynch, & Irving, 1989), suggest that a substantial number of students are not ready, in Year 5, to decide on a direction of endeavour, or, specifically, on a future career path. In response to the question 'What type of job would you like to do on leaving school?', almost two-thirds of all Year 5 students (N=14250) surveyed indicated that they were either uncertain (56 per cent) or had no idea (10 per cent).

In commenting on the present framework for transition courses, Lauder et al (1989) touch upon two problems, in particular, that may throw some light on these issues. First, they point out that while the criteria for the funding of school-based transition programmes is broad enough to include all students, "the placing of 'disadvantaged groups' at the top of those for which transition funds are targeted clearly provides a directive as to who transition provision is primarily aimed at" (p29). This selectivity suggests that transition education is seen only as having a remedial function. While remedial and preventive approaches are appropriate for ameliorating or removing problems and deficits in experience and knowledge, there is also an educational and developmental role for transition education (Super, 1957, 1980, 1983) that is clearly not recognised in New Zealand schools. As the research in this area from other countries has shown, individuals differ greatly in their readiness to make sound educational and career choices (Super & Overstreet, 1960; Jordaan & Heyde, 1979; Trebilco, 1981; Holland, Power, & Gottfredson, 1980; Lokan, Boss, & Patsula, 1982; Blustein, 1988). Thus, it would appear that the needs of a great majority of students who require experiences contributive to their growth and development, are not being met.

The apparent lack of provision, to many students, of the experiences necessary to help them to develop possibilities and potentialities, may be linked to a second problem identified by Lauder et. al. Despite government commitment to a national comprehensive system, Lauder et. al. (1989) point out that much of the development and implementation of Transition Education has been of an ad hoc nature with the result that no clear and definite guidelines were ever laid down. In reference to funding specifications, Lauder et. al. (1989) state, "There is no clear philosophy or view which indicates how the various aims and criteria for funding are to be integrated into a consistent programme" (p30), and in light of the direction in policy in general, "we have had to reconstruct the Government's initiatives with respect to transition courses from various documents. To our knowledge there is no single document in which a clear and detailed policy has been laid out to show how the various parts of the education and training system are to be integrated and what the philosophy for doing so is" (p30). In researching this area for the present study (three years later), the present writer was also confronted with similar problems.

A national reorganisation policy which really implies that local authorities can interpret and implement the system in their own way has naturally resulted in anomalies and disparities from one school to another. The variability of degree of commitment and efficacy of provision is suggested by the findings from a recent study of work exploration in ten secondary schools in the Manawatu region (Ponter, 1990). Although descriptive, and therefore limited in generalisability, the following conclusion drawn by Ponter does raise some reason for concern about too much reliance being placed on local initiative:

"In Manawatu schools the status of Transition Education and Work Exploration is variable. There are gaps between policy as envisaged and policy as implemented. If Work Exploration has a position of significance it is often due to the efforts of individual teachers. The ideal of integrated Transition Education across the curriculum, although attempted in some schools is still very much an ideal and in some schools is resisted" (Ponter, 1990, p47).

Whether indeed there is greater uniformity of provision now than two decades ago is a controversial and unsettled question (Lauder, Khan, & Chad, 1988). The following quotation is a concluding statement from Gilling's (1989) discussion of the psychosocial implications for displaced workers in New Zealand, brought about by recent government economic and social restructuring initiatives. Although the topic of interest in Gilling's article is redundancy, many parallels are found between the issues raised here and those that have been voiced alongside recent changes in the ways schools prepare their students for the transition from school to work.

"There is no doubt that restructuring had to take place; changes in the administration and organisation and philosophy of the labour market were overdue, and necessary. Questions do need to be asked, however, about the way these have been taking place; the pace, the timing, the manner in which they have occurred, and especially about the lack of learning about human need and response, the lack of research and long-term monitoring" (Gilling, 1989, p100).

The message is clear. Empirical validation of the assumptions underlying current models and practices that are intended to equip young people with the resources for successful transition from school, is urgently needed. What is particularly disturbing is the fact that many of the changes that have taken place are largely founded on the recommendations presented in a series of reports that, themselves, lack credibility. Such reports as the Government Transition Education Committee: Summary Statement (1985), Skills for Young People, (1985), The Report of the Inquiry into Curriculum, Assessment, and Qualifications in Forms 5 to 7 (1985), The Curriculum Review, the Report of the Committee to Review the Curriculum for Schools (1987), and Learning for Life: Education and Training Beyond the Age of Fifteen (1989a) have been particularly influential to changes in the organisation and objectives of upper-secondary level education. A common feature among all of these reports however, is the clear lack of reference to any research or even to theory to justify the importance of a particular objective or to support the efficacy of a particular strategy. There are no references except to other policy documents. Not only does this raise questions about the viability of the changes that have taken place as a consequence of these reports but also, to questions about their continuation.

2.3 Psychological Development during the Transition from School to Work

Section 2.1 of the present chapter provided a brief account of the changing occupational structure and the current climate of employment confronting today's school leaver. The structural changes outlined, coupled with the impact of economic recession and increasing technological change have had far reaching repercussions on the nature and availability of employment, particularly on the nature and availability of employment for the young. It is, therefore, more important than ever that school students are assisted in making the right decisions about their future role in the world of work. Section 2.2 examined the educational responses to this realisation, including the development and diversification of upper secondary education and the increased emphasis on Transition Education. However, in spite of the many improvements which have been made in educational provision, it is still a matter for continuing discussion as to whether the needs of a large sector of students are being met (see Section 2.2.3). While schools can neither provide the specific vocational (job) training required by our modern employment structure, nor control youth unemployment, they do have a critical role to play in facilitating their students' acquisition of knowledge, abilities, and attitudes that will enable them, on leaving school, to initiate positive and responsible action toward a satisfying and successful role in the world of work.

In order to fully appreciate the implications of a clear sense of direction for healthy development in the post-school environment, the present section examines the likely influence of educational and occupational experiences upon the school leavers' psychological and social development.

The importance of work in the adult life cycle goes well beyond meeting economic needs. Work also provides a means of meeting far broader social and psychological needs. In a study of what young adults preparing to enter the workforce in the 1980's expected from their jobs, Bachmane and Johnston (1979) found that the primary goals were not money, respect, or status, but rather, (1) interesting work that, (2) uses skills and abilities, with (3) good chances for advancement, and (4) a predictable, secure future, where one can (5) see results of what one does, (6) make friends, and (7) be worthwhile to society. Both college and non-college youth rated these seven attributes more important than money, respect, and status (which were placed, respectively, 8, 9, and 10).

In addition, there is evidence indicating that not working (unemployment) can have negative psychological consequences. The results of longitudinal studies of unemployed school leavers in Australia, for example, have consistently shown the likelihood of adverse psychological consequences to be higher for those unable to secure a job (Peterson, 1989). In one of these studies, Patton and Noller (1984; cited in Peterson, 1989) first measured self-esteem, locus of control, and depression in 113 Brisbane high school students. Five months later, some had found jobs, some had stayed at school, and some had left school and were unemployed. As compared with their earlier self-esteem scores, dramatic drops were noted in the

unemployed group after just five months of searching for a job. A slight contrasting boost in self-esteem scores were obtained for those who had found a job. Along with the drop in self-confidence, depression and apathy also increased in the unemployed group to levels far above those obtained when they were still at school. As shown in Chapter Two, Section 2.1, the importance of work, as a stimulus for healthy adult development, is also applicable to the young people of New Zealand.

Work is seen as a means of self-definition and as a route toward resolving the wider crisis of identity (Erikson, 1968; Marcia, 1980) during the adolescent and early adult years. In his studies of employed and unemployed school leavers in Melbourne, Gurney (1980; cited in Peterson, 1989) reported major progress in the formation of a clear and stable identity by the employed group after they moved from high school into their first jobs. For those who were unemployed, little change was found in the extent to which such a sense of self had been achieved.

Traditionally, employment has been seen to play a major role in the young person's acquisition of the types of roles and responsibilities associated with adulthood. Current work in this area (OECD, 1984; Wilson, Wyn, Reeders, & Woock, 1987) has suggested that the majority of young people today still view work as a normal and necessary part of adulthood. In their study of the relationships between education, work, and youth policy in Australia, Wilson et al found that although the attitudes of young people about work are mixed and diverse, the majority want to work, not only for the money, but also to extend their social networks, to be integrated into society, and, in particular, to be seen to have a useful role in their community. Thus, as well as constituting the first stage in a lifelong pattern of career development, the young person's initial steps toward the world of work also serves as a major milestone for adult psychological development. There is no reason to assume that the situation in New Zealand is any different.

For those who finish high school and move into the paid workforce, the transition to adulthood would seem to have occurred. However, as shown in Section 2.1 of the present chapter, such a clear-cut pattern in contemporary society is the exception rather than the rule. The number of school leavers in New Zealand who are actually taking on work roles has been steadily decreasing. Many young people are delaying entry into the labour market by opting to stay on in full-time education; many are being forced on to government funded schemes for unemployed youth in order to bridge the gap between school and work; and many are experiencing long periods of unemployment.

In an analysis of similar trends in other member countries of the Organisation for Economic Co-operation and Development (OECD), Coleman and Husen (1985) labeled this phase as a stage of 'redundancy'. "Young people today from later teens to early 20's in important respects live in a no-man's land. The attachment to family has decreased. Schools in the later teens no longer acts 'in loco parentis'. For

many, employment is temporary and sporadic. Even the question of who should be financially responsible for young people in this transition period is unresolved" (Coleman, et. al., 1985, p9).

Developmental psychologists have also come to view the prolongation of the period between school and work as a new stage of life. Ken Keniston (1975) calls this stage 'youth', and he believes that it can be a time of very important social and personal growth. Youth makes possible "a more autonomous, more individuated position vis-a-vis the existing society and can permit the individual to achieve a degree of inner complexity, differentiation, and integration not possible to those whose development is foreshortened or foreclosed" (Keniston, 1975, p4).

Keniston's thesis is that we are witnessing today the emergence, on a mass scale, of a previously unrecognised stage of life; a stage of life where the post-adolescent is characterised by the fact that they have not settled the questions whose answers once defined adulthood: questions of career, questions of social role and life style.

Rather than solving the 'problem of youth' by making more room in the workforce, rather than developing new forms of therapy to close the generation gap, society, Keniston believes, ought simply to accept the young and their questions as an opportunity for growth. Conflict between one's own identity and what the society offers or demands, he writes, is critical to the emergence of a really mature human being in the post-industrial world. Following Erikson (1968), Keniston defines the task of youth as individuation versus alienation. In addition to the changing of one's relationships to one's elders, and the shift to mutuality in one's relationships, Keniston points out that a central development during this phase of life is the exploration and establishment of an occupational role.

At a time when young people face far greater tensions and dilemmas in moving toward adult roles, it is of the utmost importance to ensure that school leavers are prepared to accept the reality of constructive pathways toward employment, to engage in these pathways successfully, and to find personal relevance in the life options available to them.

2.4 Summary

The present period in our history is considered by many to be sufficiently momentous to warrant the adoption of new definitions (see Section 2.1.2), most of which can be considered under the umbrella term of the 'post-industrial era'. The notion of post-industrial society is useful because it focuses on trends and their likely future directions. In particular, these trends are manifesting themselves in the occupational structure so that increasingly, the transition from school to work involves far greater tensions and dilemmas than in the past. Against a background of economic recession the impact of the changes taking place are particularly acute so as to emphasise the necessity for school leavers to have the attitudes, knowledge, and skills, to undertake effective steps toward the world of work.

The school leaver's awareness of existing options, the ability to discriminate alternatives congruent with their strengths and needs and the occupational structure, and the competence to execute plans by which to work toward their goals are considered important performance outcomes of the secondary sector of our education system (Hawke, 1988). For almost a decade, the planning and development of programmes to facilitate school students' career development, has remained a central theme in changes in the organisation and objectives of upper-secondary education (see Section 2.2).

There is much conjecture and debate, however, about the efficacy of these reforms. Little attention has been placed on demonstrating the credibility of the many decisions made and implemented in the restructuring process (Snook, 1991). Moreover, the lack of an organising framework within which changes to upper-secondary school curricula could take place have meant that there still exists, in a number of schools, a sense of confusion of purpose and identity (Lauder, Khan, McGlinn, 1988). Likewise, the development of transition education has frequently been rapid and of such an ad hoc nature that it continues to be a highly contentious area (Daley, 1990; Ponter, 1990).

Thus, despite the recent emphasis on facilitating school leavers adaptive career behaviour, the effect of such efforts remain unclear. Arguments advanced earlier in the present chapter (Section 2.2.3) suggest that the needs of a large sector of school leavers are not being met. In light of the lack of evidence to the contrary, this raises concern about the future psychological health and social stability of the great majority of our youth population.

It is timely, therefore, that theoretically informed research, capable of generating data to enlighten our knowledge of the career development of school leavers, is initiated, so that some ground for the provision of current and future strategies is provided. With the overall objective of assessing the nature, and adjustive function, of school leavers' career development, the present study should go some way toward meeting this need.

CHAPTER THREE

DIMENSIONS OF EFFECTIVE CAREER DEVELOPMENT, AND THE RELATIONSHIP OF CAREER CHOICE COMPETENCE TO PSYCHOLOGICAL ADJUSTMENT

Introduction

The present study concerns itself with the career development of school leavers in the present climate of rapid technological and consequently occupational change. The background to this study has now been examined in some detail (Chapter Two) and the time is appropriate to review the relevant literature pertaining to the career development of school leavers.

This chapter provides a review of the theoretical and empirical literature examining the process of effective career development during the late adolescent/early adulthood years. In the first section, the antecedents and outcomes of career choice competence during this phase of the life-span are examined. The second section examines selected personality and psychological well-being variables indicative of general psychological adjustment, and attempts to relate these conceptually, to outcomes in career development with the purpose of identifying the adjustive role of career choice competence in the post-school environment. This chapter concludes with a summary of the aims, hypotheses, and research questions addressed in the present study.

3.1 Antecedents and Outcomes of Career Choice Competence

Career development is a process, involving both growth and learning, which takes place across the life-span. It is assumed that (i) career-relevant behaviours mature in a systematic fashion; (ii) the maturation process can be facilitated by appropriate experience; and (iii) tasks characteristic of the various phases of career development need to be accomplished for growth and development (Super, 1969; Crites, 1973, 1984)

The specification of an occupational preference is the career development task most prominent during the process of transition from school to work (Super et. al., 1978). In specifying their preferences, young people narrow a general career direction into a specific one and take the necessary steps to implement the decision. Thus, the prospective air-conditioning and refrigeration technician enrolls in an electrical engineering programme at the local community college, while the student who likes the outdoors and has a scientific bent begins the study of horticulture. While the process may be moderated by such factors as finance, restricted courses, geographic barriers, and so on, it is assumed that these will be less of an obstacle for the individual who is prepared with the relevant knowledge (for example, of alternative routes), attitudes (such as, accepting the possibility of having to modify initial plans), and behaviours (for example, exploring alternatives and initiating the necessary steps to modify the original plan) that such constraints may require. Thus, the intended horticulturalist who does not have access to finance for a full-time course of study may decide to opt for a part-time study programme, and to seek part-time employment.

Super (1957,1963,1983) has indicated the attitudes and behaviours that are necessary for the successful accomplishment of the career task related to preference specification. These involve being aware of who one is, of where one wants to go, and of how to get there. Individuals who demonstrate greater clarity and certainty in their decision-making during this phase are likely to be better adjusted (and therefore, more satisfied and successful) in the years following implementation of a decision than those who are less clear or certain of their career plans (Jordaan & Super, 1974). In the context of the present research, the school leaver most likely to succeed in taking effective steps toward entry to the world of work would be expected to have some idea of a preferred career choice, knowledge of what to do in order to attain that goal, and would also be expected to be working toward (or to have already worked toward) attaining that goal.

The process of deciding on a preferred career direction is considered a developmental sequence in which the crystallisation of an occupational preference represents a series of decisions made over a period of years rather than an accidental decision stemming from a single episode (Ginzberg, 1972; Jordaan & Heyde, 1979; Harren, 1979; Holland, 1985; Crites, 1973; Super, 1963, 1974, 1981, 1983; Vondracek, Lerner, & Schulenberg, 1986). According to Ginzberg (1972), for example, progress toward an initial career

selection proceeds through a sequence from fantasy choices in childhood that show little real understanding of either the requirements of the job or of one's own strengths and needs, through tentative evaluation in early adolescence, and toward realistic cycles of exploration and crystallisation in late adolescence/early adulthood. Ginzberg refers to this 'realistic stage' of development as one of compromise in which interests, capacities, values, and opportunities are taken into consideration.

The assumption that reality considerations affecting career-related decisions assume increasing influence from childhood through to adolescence and early adulthood is also inherent in the theoretical formulations of Super (1957, 1963). Super interprets career behaviour as a time-extended effort to build and implement a self-concept. Self-concept might be understood as the forerunner of identity. Self-concepts include elementary ideas about what feels comfortable and appropriate and what kind of activities are within one's abilities, as well as habits, patterns, and cultural, social, and economic realities that limit what one might become. As Erikson (1968) has proposed, determining an occupational identity represents one of the central challenges of the identity formation process in late adolescence. Similarly, career development theorists have suggested that the degree to which individuals are able to establish coherent career plans seems to be linked to their progress in forming a crystallised self-concept or identity (Harren, 1979; Holland, 1985; Super, 1957). In the context of youth's career developmental-task learning, "self-concepts begin to form prior to adolescence, become clearer in adolescence, and are translated into occupational goals in adolescence" (Super, 1957, p98).

The recommended method for approaching the formulation of career preferences, decisions, and plans is reflected in the construct of 'career maturity'. Career maturity refers to the degree of competence people demonstrate in coping with the tasks and problems of career development at various life stages (Crites, 1973, Super, 1963, 1974, 1983). Career maturity is a multidimensional trait (Super, 1983; Super & Kidd, 1979), which has both attitudinal and cognitive components, and which increases irregularly with age and experience. The study from which the construct of career maturity was developed was the Career Pattern Study, a longitudinal research programme that began with 142 ninth-grade boys (aged 14 to 15 years old) in New York, by Super and his associates in 1951 (Super & Overstreet, 1960). Initially a variety of possible indices of career maturity were administered to the sample group, and the relationships between these indices were examined to establish those demonstrating construct validity. In later parts of the study, these results were related to occupational and career success and satisfaction (Jordaan & Super, 1974). The results showed that readily accessible factors showing significant correlations with such variables at age 25 were planfulness, awareness of choices to be made, and acquisition of occupational and career information.

The following summary outlines the attitudinal, cognitive, and experience components that Super's (1983) model of career maturity, considered necessary for the successful accomplishment of specification, as a career task:

- (1) Attitudinal career maturity consists of:
 - (a) planfulness - that is, recognition of the need for and possibility of planning for the immediate and more distant futures
 - (b) awareness of, and willingness to cope with the developmental tasks of exploration and specification, and willingness to focus on these tasks as the need to recycle occurs at later life stages
 - (c) engagement, both affective and behavioural, in exploration, decision-making, planning, and the implementation of plans
- (2) Cognitive career maturity consists of:
 - (a) acquisition of information about educational and occupational paths and opportunities
 - (b) learning the principles, processes, and content of career decision-making
 - (c) knowledge of oneself
 - (d) realism in relating knowledge of self to situational information
 - (e) consistency of career objectives, with flexibility in realistically modifying them with experience
- (3) Increases in career maturity are a function of experience, and depend on the degree to which current situational variables lead to:
 - (a) confrontation with the need to make career decisions
 - (b) facilitation of coping with these decisions

Thus, the mature school leaver who is coping (or has already coped) effectively with the specification career task (and therefore, demonstrates clarity and certainty of a preferred career direction), is characterised as one who is aware of the need to plan ahead for the future, and to have made and accepted responsibility for plans related to future career areas. They are assumed to have some understanding of their own abilities and interests, work related needs and values; to possess information about a variety of aspects of the world of work in addition to information of preferred occupational areas, and to demonstrate competence in integrating these factors to make well-informed decisions.

Although the term 'career maturity' is not found in New Zealand's Department of Education Literature, their Career/Transition Education objectives include many variables that can be classified clearly as career

maturity variables. The New Zealand Department of Education (1981, 1989) has published an extensive list of objectives for the area of career and occupational development. In their 1981 publication, these were grouped under four main objectives, including (1) self-awareness, (2) opportunity awareness, (3) planning, and decision-making, and (4) transition skills. These are identical to the British model (Watts & Herr, 1976), although the source in the New Zealand publication is not acknowledged. Furthermore, Super's model of career development forms the basis of the British and American models of career education (Watts, et. al., 1976). The revised set of objectives for New Zealand career/transition education, are summarised in a two-page objectives list (Department of Education, 1989) that retains these same critical four objectives while embodying a number of other changes.

Thus, although the New Zealand Career/Transition Education literature does not document the source of their objectives, it is clear from reading the literature from other countries, that the framework for career/transition education in New Zealand is based on those aspects of Super's (1957, 1963, 1974) theory of career development both directly and through the materials developed at the National Institute for Careers Education and Counselling in Britain.

The importance of these career development dimensions to the readiness for career decision making have been supported in a number of studies. In one of these, Grotevant and Durrent (1980) examined the relationship of occupational knowledge to career choice in 6029 senior high school students from 57 schools in Texas. Information about students' occupational interests and educational and occupational plans was collected and compared to information about the actual requirements of expressed career choices. The results of the study showed that, of the students who claimed to have at least considerable understanding of their first career choice, only about half planned to attain the amount of education or training needed to enter that occupation. The correlations between educational plans and the educational requirements for the chosen occupation were, at most, .41.

Such discrepancies may have important implications for the transition from school to work. Aspirations which are not met can be the source of much frustration, dissatisfaction, and unhappiness. As the Career Pattern Study showed, appropriate types of occupational information in 12th grade (required preparation, supply and demand, and hours of work) contributed significantly to the prediction of job and career satisfaction and of occupational advancement and career progress at age 25 (Jordaan & Super, 1974).

Thus, it would seem that prior knowledge of the necessary requirements, demands made, and the opportunities offered by preferred occupations can greatly facilitate not only the ability to undertake successful steps toward such an occupation but also, the process of adjustment while undertaking these steps.

Although addressing a completely different set of research issues, a study carried out through the District Employment and Training Advisory Committee (1985) also provides some indication of the likely consequences of occupational awareness for adjustment in the post-school environment. Interviews with a group of 61 Manawatu school leavers, who were either unemployed or had moved on to government funded work schemes, revealed a large discrepancy between the school leavers' expectations, attitudes, and qualifications and the actual employment conditions and requirements of the labour market.

The implications of an adequate awareness of existing options are not only restricted to school leavers moving directly into the workforce. In an examination of differences between college students who had decided on a preferred career choice and those who had not, Holland and Holland (1977) identified a segment of undecided students that only needed career information to help them to make a decision. Such students, Holland et. al. explain, enter college, quickly find their career goal is unobtainable or unsuitable, but have very little information about alternative occupations.

Thus, it seems essential to the effective career decision-making and implementation of career choices, that the school leavers' occupational and educational intentions are based on awareness of a range of opportunities available in the post-school environment.

In addition to the importance of opportunity awareness, self-awareness also constitutes an important component of mature career decisions and choice implementation behaviour (Crites, 1973; Super, 1963, 1981, 1983; Jordaan & Super, 1974). The degree to which an individual has developed an integrated and cohesive sense of self is thought to facilitate the internalisation of goals and values. These are reflected in late adolescence by a clear sense of direction (Erikson, 1968; Marcia, 1980).

Higher levels of certainty and clarity of vocational abilities and interests have been shown to be related to feeling less need for occupational information and less obstructed by career barriers (Healy & Mourton, 1985; Holland, Gottfredson, & Power, 1980); being rated well-organised, competent in handling life, and self-confident (Holland, et. al., 1980); feeling successful with, and in control of, one's life (Larkin, 1987); and, to a sense of well-being (Holland, 1985).

In the area of facilitating career decision-making, a number of studies have revealed that variations in the possession of a clear and stable picture of oneself, are associated, in the expected direction, with the degree of career decidedness (Barret & Tinsley, 1977; Grotevant & Thorbecke, 1985; Healy & Mourton, 1985; Holland, 1985; Holland & Holland, 1977).

This line of inquiry suggests that individuals who approach career decisions with a clear sense of self also tend to have more success in establishing coherent career plans. More specifically, if an individual has

been able to decide upon a preferred career, he or she would seem likely to possess a high degree of knowledge about work-related strengths, needs, interests, and values.

Research has shown that individuals with high levels of goal instability lack the capacity to engage in various self-initiated activities and tend to experience a sense of self-depletion and inhibition in work (Robbins & Patton, 1985); alternately, goal directedness has been associated with personal competence, self-confidence, and self-esteem (Robbins et. al., 1985). Thus, individuals who are relatively clear regarding their future career goals would also be expected to engage in the sort of activities that would foster the attainment of that goal, and to feel more competent, confident, and personally satisfied than those undertaking a path without such a clear sense of direction.

Insofar as the career question is central to the contemporary young person's overall identity growth (see Chapter Two, Section 2.3), then the development of a career identity is also an important stimulus to adult development and adjustment. In an investigation into the relationship between aspects of Erikson's (1968) identity crisis and task of intimacy, Kacerguis and Adams (1980) found that a young adult's resolution of the occupational aspects of the identity crisis was a better predictor of future development progress through Erikson's stage system than other identity issues such as the crystallisation of personal values, moral codes, or the development of a sense of identity as a friend. Among the 88 male and female university students in their sample, one group had resolved the crisis over occupational identity to the point of having explored options for themselves and settled firmly on a career that marked their own particular goals and abilities. When it came to Erikson's next crisis over intimacy, this group had made greater progress than their peers whose occupational identities were either foreclosed, diffused, or in moratorium. Kacerguis and Adams also found that, in contrast to the theoretical link between intimacy and the sense of self as a future partner, a student's degree of resolution of interpersonal or philosophical identity issues bore no clear relationship to his or her level of intimacy development. Thus, quite apart from facilitating the process of career decision-making and career choice implementation, the development of a career identity, in itself, provides an important stimulus for adult psychological development.

In an examination of the process by which individuals crystallise and specify career goals, one developmental task to emerge consistently across various theoretical approaches, involves the exploration of oneself and the external environment (Harren, 1979; Jordaan, 1963; Stumpf, Colarelli & Hartman, 1983; Super, 1957).

'Exploration' involves seeking information about what one is interested in and what one might be able to do with one's aptitudes as well as about aspects of a wide variety of occupations - prospective salaries, the amount of education or training required, the prestige that goes with a job, and also the possibility of finding employment in a given occupational field.

While it is recognised that exploration occurs at all ages and phases of development (Super & Kidd, 1979), exploratory behaviour emerges as an important activity during the high school years as the reality of approaching the first significant career decisions begin to assume a central role. In this context, exploration has been described as a necessary precursor to crystallisation, choice, and implementation (Tiedman, 1961), as that which occurs after the need to decide is apparent and before commitment can be made (Harren, 1979), and as the central activity required to produce a satisfactory decision (Gelatt, 1962). However, not all individuals explore to the same degree (Jordaan & Heyde, 1979; Stumpf et al, 1983). Further, empirical evidence suggests that those who proceed unequipped by the benefits of exploration are less likely to engage in effective career decision-making and job implementation behaviours (Grotevant, Cooper, & Kraner, 1986; Phillips & Strohner, 1983; Stumpf, Austin, & Hartman, 1984; Taylor, 1985), and are less likely to incur positive decisional and developmental outcomes (Greenhaus & Sklarew, 1982; Phillips, 1982).

The role of the school is especially important in career exploration, since families and friends tend to be from the same social class and often know little about educational opportunities and occupations other than their own. Support for this supposition is provided in a study by Chamberlain (1982), in which British students who had had regular career education lessons were found to have sampled a much wider range of information sources than those who had not. The latter tended to rely mostly on family and friends, which Chamberlain felt put them at a disadvantage. In this context, Chamberlain (1982) explains that, "For many children, parents represent a credible information source and therefore any advice they offer may be given serious consideration. Friends of the family, other relatives and neighbours may find themselves in a similar position. Unfortunately, these people are not always the best equipped to offer advice because their occupational experience may be severely restricted and the attitudes to work may be biased or at least a generation out of date" (p79).

Efforts to enhance career exploration activities among high school students generally are included in the literature under the Career Education banner (Jordaan, 1964; Goldhammer & Taylor, 1972; Lokan, 1984; Watts & Herr, 1976; Super & Hall, 1978). Career Education has been defined as "a systematic attempt to increase the career options available to individuals and to facilitate more rational and valid career planning" (Goldhammer & Taylor, 1972, p6). The basic objectives of career education are to enlighten students on the career implications of educational alternatives, to afford them insight into both occupational and non-occupational roles, such as family and leisure roles, and to develop skills relating to self-assessment (that is, in recognising and coming to terms with their own strengths and needs) (Watts and Herr, 1976). An important component of careers education is educational and career guidance, and this is seen as a vehicle for helping students to develop decision-making skills and preparing them for the personal adjustments required in the post-school environment (Watts & Herr, 1976). Within New Zealand, Career Education is considered a component of Transition Education (Catherwood, 1985),

although it is not clear how the two differ. Indeed, the similarity between Career Education in most western countries, and Transition Education in New Zealand (see Chapter 2, Section 2.5) suggests that the two definitions can be used interchangeably.

A number of studies have been conducted dealing with the implications of career education interventions in schools for students' career maturity (for example, Khan & Alvi, 1983; Reiner et. al., 1984; Trebilco, 1982).

In an examination of the effects of a Life-Planning course on 300 high school seniors who were undecided about their major life plans, Reiner et. al. (1984) found that the participants were more rational and less intuitive and dependent in their decision-making styles after the course. The course also increased their certainty of major and career choices. In addition, the students enrolled in the Life-planning course were found to have fewer vocational identity problems and more career information as a consequence of the instruction.

Trebilco (1981) also found that career maturity can be positively affected as a function of career education programmes.

Trebilco (1981) addressed the question "Does career education make a difference?" and "Do some kinds of career education programmes make more difference than the others?". More than 2000 Year 9 and Year 11 students randomly selected from a pool of 40 secondary schools in Australia (including 19 government high schools, 8 government technical schools, and 13 non-government schools) were involved in the study.

The Career Development Inventory - Australian Adaptation (CDI-A) (Lokan, 1984) was used to measure career maturity. This instrument is derived from the American version (Super, Forrest, Jordaan, Lindeman, Myers, & Thompson, 1979) and is designed to measure orientation towards planning, awareness and use of resource persons and materials, general knowledge of the career development process and the world of work, and knowledge and application of decision-making principles.

In addition, questionnaires to describe career education programmes and the degree of support given to these programmes within schools were administered to 40 careers teachers, 40 principals, and 120 subject co-ordinates.

From a factor analysis of the principals' and teachers' questionnaire responses, the schools in the sample were able to be described and clustered in terms of the following five factors:-

- (1) the support of the administration for career education;
- (2) the resources and facilities available for the career education programme;
- (3) the job satisfaction of the careers teachers;
- (4) the support of other members of staff for the careers teacher and the career education programme;
- (5) the closeness of the objectives and activities of the career education programme to a set of implications derived from Super's career development theory.

Altogether, five clusters of schools were obtained, four clusters of schools with career education programmes and one without such programmes. Trebilco reported the following findings, based on a series of chi-squared and other analyses:-

- (1) Year 11 students in secondary schools with no career education programmes scored lower on all dimensions of career development assessed by the CDI-A than their counterparts in schools with a career education programme.
- (2) Year 11 students in secondary schools in which the career education programmes bore the most resemblance to recommendations and implications derived from Super's theory were more likely to score high than low on all dimensions of career development assessed by the CDI-A when compared with their counterparts in schools where the career education programmes bore little resemblance to the theory.
- (3) Year 11 students in secondary schools in which the career education programmes received the most positive support scored higher on all dimensions of career development than their counterparts in schools where the programmes received less support; higher staff involvement in career education was associated with higher levels of career planning and exploration (as measured by the CDI-A) while greater availability of career resources materials was associated with higher levels of all career development components measured by the CDI-A.

There were no significant differences in CDI-A among students in the various clusters of schools at the Year 9 level, a finding that supports the associations found between type of career education programme and CDI-A scores at the Year 11 level - most commonly, career education efforts in Australian schools appeared strongest at Year 10. (In New Zealand secondary schools, this corresponds to Year 3, previously referred to as the Fifth Form).

Based on his study, Trebilco made the following recommendations for secondary schools:-

- (1) Students' level of career development can be improved by the inclusion of an appropriate career education programme in the School curriculum.
- (2) The most effective programmes are those in which aspects of career education are included at all secondary year levels.

- (3) Schools desiring to foster career maturity in their students need to devote sufficient resources to the programme for the students and teachers to feel that their school views career education as important.
- (4) Career education programmes need to include aspects other than merely giving out career information.

As the preceding discussion suggests, self-appraisal and information gathering activities are instrumental in fostering the crystallisation, and specification of a career choice. Further, structured interventions such as career education programmes in secondary schools seem to have an important role to play in mediating this process. The value of career exploration for the high school student is seen in the fruits of the effort: the high school student who engages in exploratory behaviours designed to crystallise occupational preferences emerges from the experience with a clearer and more accurate assessment of him- or herself (as an individual and in relation to the environment) and a realistic, justified basis for taking decisive action (Jordaan, 1963). Thus, high school students who appropriately preface their occupational preferences with exploration would be more likely to undertake effective steps toward a successful and satisfying role in the adult world of work than those who leave school less aware of the implications of a chosen path.

3.2 Psychological Correlates of Career Choice Competence

Insofar as career development is an aspect of general development (Vondracek, et. al., 1986), then it would also be expected that characteristics of generally adaptive behaviour would also tend to be relevant to adaptive career behaviour. In order to examine the potential influence of school leavers' career development for adjustment in the post-school environment, the present section considers the conceptual and empirical relationships of selected psychological variables to outcomes in career decision-making and implementation behaviours.

One characteristic of mature, well-adjusted individuals which seems conceptually to be particularly relevant to the specification career task is represented by the self-esteem variable (Coopersmith, 1981). Self-esteem refers to the individual's perception of his or her worth in relation to their life context. It is a commonly studied aspect of the phenomenal self which is associated often with such terms as 'self-satisfaction', 'self-appraisal', and 'self-concept' (Eysenck & Arnold, 1972). The attainment of a favourable attitude toward oneself is considered to be a very important feature of healthy personal development. In particular, self-esteem has been shown to be related to physical health (Fitts, 1965; Rosenberg, 1965), mental health (Battle, 1981; Piers & Harris, 1984), and social relationships (Coopersmith, 1975).

According to Coopersmith (1981), an individual's self-esteem represents the evaluative aspects of the self-concept and develops as a result of his or her interactions with the social environment.

In the context of career decision-making, Phillips, (1982) found that high school students who perceive themselves as confident, proud of their behaviour and performance, liked by others, and happy were more certain of their occupational choice and more ready to decide than students who did not perceive themselves in similar terms.

Similarly, Khan and Alvi (1983) reported low to moderate statistically significant correlations, in the expected direction, between their measure of self-esteem and CDI subscales.

These results show that, to some extent, the attitudes and behaviours conducive to effective decision-making, are also associated with higher self-esteem.

A second psychological variable which has been viewed as a potential correlate of adjustment is 'Locus of Control'. (Leftcourt, 1972; Rotter, 1972, 1982). The control construct, which has been thoroughly described by Joe (1971), Leftcourt (1972), and Rotter (1975;1982), pertains to the generalised expectancy continuum for reinforcements to be controlled by chance, fate, luck, and powerful others versus one's personal attributes (Rotter, 1982). Those believing that they do have some control over events, whether

these events are positive or negative, are termed as having an "internal" locus of control, while those believing that their lives are largely determinable by external causes (for example, luck, fate, and so on), are termed as having an "external" locus of control. 'Internals' have been consistently found to function in a more positive, effective, and adaptive manner in a wide variety of situations than 'externals' (Gilmour, 1978).

In relation to the development and specification of career options, this perception of control may reflect a healthier adjustment and higher level of career decidedness as individuals proceed to undertake a given career direction.

Of particular relevance to successful accomplishment of the specification career task (Jordaan et. al., 1974; Super, 1963, 1981, 1983), are the relationships which have been established between internality of control and need for achievement, awareness of aspects in the environment which provide information useful for future behaviour, the tendency to make more use of past learning experiences in achieving future goals, and the tendency to make more plans to improve one's life conditions (Rotter, 1982). All of these attributes can be recognised as aspects of effective career adaptability during late adolescence, as described in terms of appropriate attitudes and behaviours by Super (1957, 1963, 1983) and as a psychological process by Jordaan (1963).

The notion of 'career decidedness' captures a position that includes clarity as well as self-confidence about one's choices, a positive sense of one's future, and awareness of potential obstacles. As suggested by previous research, individuals with a greater sense of direction in their lives are also more likely to achieve a greater sense of well-being than those who are not so clear about the meaning and purpose of what they are doing (Robbins et. al., 1985; Arnold, 1989).

In order to investigate the relationship between career decidedness and psychological well-being, Arnold (1989) tested 281 undergraduate students' anxiety, life satisfaction, and self-assurance as well as including a measure of the extent to which they had decided on a preferred career choice. After several months, Arnold contacted the young people again. By this time, half of the sample had graduated, and half had progressed to their final year of undergraduate study. In the first stage of the study, Arnold found that the level of career decidedness and psychological well-being were significantly correlated. Students who were more decided about their career choices also tended to be more satisfied with their lives, confident, and less anxious than those who were undecided, had difficulty choosing, or had not thought of any career plans. When he compared the earlier and later scores of those who had graduated, Arnold found little change in well-being scores among students who had previously been undecided, but those who had remained decided about their career choice during the six month period showed higher gains in life satisfaction and self-assurance, and a drop in anxiety. For the students who had progressed to their final

year, career decidedness benefited life-satisfaction but not the other aspects of well-being.

Thus, it seems that individuals who are more decided about their preferred career choice also tend to be more satisfied with their life. For those approaching and experiencing a career transition, such as the students who graduated during Arnold's research, being decided is also likely to enhance self-confidence and decrease anxious feelings associated with the changes in orientation to their life roles.

Based on his findings, Arnold (1989) concluded that, " In line with previous arguments and other theorising about transitions, it could be suggested that being unable to specify a career choice deprives the young graduate of a potential fixed point which could help make sense of novel experiences in new work (and non-work) environments. Further difficulties could arise through feeling under pressure from socialising forces to express commitment to some occupation or organisation for which no particular affinity is experienced, and in which it is difficult to see any clear present or future role for self" (p174).

The process of transition from school to work involves considerable changes in behavioural requirements, social interactions and social roles (Louis, 1980). In her theory of career transitions, Louis (1980) points out that, upon entry to a new situation, a person is faced with a novel, uncertain environment which can create a threat to the maintenance of predictability and control, or provide an opportunity for development. She identified 'surprise reactions' or, the 'difference between an individual's anticipations and subsequent experiences' as a key feature of a person's adjustment to a new setting. People who enter a situation of person-role mismatch are likely to experience fewer confirmations of what they anticipated and therefore, experience more surprise reactions, Louis postulates that this is likely to give rise to negative emotional effects.

Insofar as career decidedness represents a goal, and considered ways of obtaining that goal, then it would be likely that movement into and through a path toward such a goal may present fewer 'surprise reactions' and hence, facilitate adjustment. Furthermore, given the various routes toward the world of work, the benefits of career decidedness seem applicable irrespective of whether the movement from school to work entails a path directly to the workforce, or indirectly, via an apprenticeship, or professional specialisation at a tertiary institution. In each case, having a 'fixed-point' at a time of transition could be beneficial to the school leavers' well-being. As suggested by the results of Arnold's (1989) study, decidedness might provide such a fixed-point. More specifically, school leavers who choose a given post-school destination with the intention of attaining a particular career goal would likely be better adjusted and able to function in a more positive and adaptive manner than those who are less clear about the purpose of their actions.

As the Career Pattern Study (Super et. al., 1960) showed, high school students (aged 18 years) who left school unaware of the future implications of their chosen path, were less likely to see themselves, and to

be seen by others, as satisfied and successful with their lives in early adulthood (aged 25 years), than those who demonstrated certainty and clarity of their future career plans (Jordaan & Super, 1974). In addition, research evidence has revealed that high levels of certainty and clarity of a career choice are associated in expected ways with job satisfaction and occupational attainment (Jordaan & Heyde, 1979; Phillips, 1982).

Thus, the implications of career decidedness for psychological well-being in the post-school environment, seem to depend, in part, on how well a given pathway reflects adaptive functioning in the current context, as well as how well the pathway serves to encourage adaptive functioning in future contexts, such as job search behaviour and attainment, and job satisfaction.

The psychological well-being literature (Arnold, 1990; Jordaan & Heyde, 1979; Phillips, 1982; Jordaan et. al., 1974), as well as the literature relating personality attributes to career-choice outcomes (for example, Khan et. al., 1983; Rotter, 1982), indicate that career development can be viewed as a function of total human development. From the preceding review, it would appear likely then, that individuals who are more decided about a preferred career will also tend to have higher self-esteem, exercise more internal locus of control, and be more satisfied with their lives than those with a less clear sense of direction.

During a career transition (Louis, 1980), career decidedness also seems likely to foster less anxiety and self-doubt (Arnold, 1989). In an examination of the adjustive function of school leavers' career development then, such psychological variables would seem to be relevant.

3.3 Summary of Aims, Hypotheses, and Research Questions

This research was undertaken to assess the level of career development of recent school leavers, and to examine the adjustive function of their career-choice competence in the post-school environment. As the theoretical literature has suggested, deciding on a preferred career plan is a major developmental task of late adolescence/early adulthood (Erikson, Harren, 1979; Super, 1957, 1981). Similarly, high school students' ability to choose a realistic and satisfying career goal represents a desired outcome criterion in upper-secondary education in general (Hawke, 1988), and in Career/Transition Education in particular (Department of Education, Transition Division, 1989). Career decidedness encompasses a clear sense of one's occupational preference along with a firm attachment to a particular vocational goal (Jordaan & Heyde, 1979; Super, 1981). A main aim, as pointed out in Chapter One, is the school leaver's level of career decidedness and the relationship to dimensions of effective career development characteristic of late adolescence. Of particular interest is the degree to which the decision to undertake a particular path on leaving school is linked to a future role in the world of work, or one made aimlessly with little advice and forethought. Such a task is considered especially important in light of recent changes to the organisation and objectives of upper-secondary education. Despite increased financial and human resources committed to the development of school-based career/transition education, relatively little is known today about the practical short-term and long-range consequences of this effort. An examination of school leavers' career plans, and the degree to which a given post-school path is accompanied by characteristics of mature career behaviour, would provide information about how well-prepared they are to undertake successful steps toward entry to the world of work. An examination of the relationship of career choice competence to aspects of psychological well-being and development would indicate the adjustive role of the school leavers level of career development in the post-school environment.

From the career development literature, and the review of empirical research related to this area, the following hypothesis pertaining to school leavers' readiness to take action toward a successful role in the world of work can now be derived.

Hypothesis One

The degree to which school leavers have decided on a preferred career will be related to the degree to which they are aware of the need for, and use of, planning, know how to make career decisions, possess information about the world of work, and understand their work-related strengths, interests, and needs.

As the research literature has indicated, and in line with career development theory, higher levels of career decidedness are associated with higher levels of career maturity (for example, Healy & Mourtou, 1985; Holland, Gottfredson, & Power, 1980; Jordaan & Super, 1974).

In relation to the sense of agency (Rotter, 1982) and self-satisfaction (Coopersmith, 1981) associated with goal directedness (for example, Robbins, 1985) and, in the context of a transitional state, a second hypothesis pertaining to the relationship of school leavers' career decidedness to psychological adjustment can be drawn.

Hypothesis Two

The degree to which school leavers have decided on a preferred career will be related to the degree to which they are satisfied with their life (Life Satisfaction), believe they are in control of what happens to them (Locus of Control), and consider themselves competent, and worthy (Self-esteem).

As the research has suggested, higher levels of clarity and certainty of an occupational goal are associated with higher self-esteem (Holland, et. al., 1980; Khan, et. al., 1983), more internal locus of control (Khan, et. al., 1983; Larkin, 1987), and more satisfaction with one's life (Arnold, 1989; Holland, 1985; Super & Jordaan, 1974).

Given the value of exploration as a stimulus for the development of attitudes, knowledge, and behaviours that facilitate successful decision-making and implementation behaviours, information about the nature of school leavers' prior exploratory activities would also seem beneficial to an understanding of their career development. Toward this end, and in light of the influence of structured interventions in schools on students' career development (Khan et. al., 1983; Reiner et. al., 1984; Trebilco, 1982), the present research sought to answer the following questions about school leavers' career exploration experiences:

Research Questions

1. What types of career/transition education did school leavers receive during their high school years, and does the nature of career/transition education experience differ amongst school leavers with different levels of career decidedness ?
2. How do school leavers feel about the usefulness of their career/transition education experience in helping them to decide what to do on leaving school ?
3. Do school leavers feel that career/transition education could be improved, and if so, what do they suggest ?
4. What reasons do school leavers give for undertaking a given post-school destination ?

CHAPTER FOUR

METHODOLOGY

4.1 Sampling

There were several practical considerations to weigh in deciding on a sampling plan for the present study. The data collection phase had to fit in to the limitations of the research programme which meant that it should be carried out as early in the year as possible. This entailed quite a full programme of work between composing the questionnaires and arranging access to recent school leavers. After much thought it was considered impracticable, as an independent research effort, to carry out surveys on a complete cross-section of school leavers. As a practical alternative to this ideal sampling strategy, a much more limited approach was adopted.

As part of an introductory psychology course at the university, where the study was carried out, an option is provided for students to participate in a research project in lieu of completing a section of the course requirement, and only those students undertaking these classes were included in the present sample.

The study was, therefore, deficient because, firstly, the sample included only those recent school leavers who had chosen to attend university. It did not include school leavers going on to other destinations. Secondly, it had only been possible to use a small subsection of students within one university. Had an additional six to eight weeks been available within the research schedule, this would have provided the time, considered necessary, to approach a better cross-section of students and would have increased the probability of obtaining responses representative of this group of recent school leavers generally.

4.2 Subjects

Subjects were drawn from undergraduate students ($N=253$) undertaking first year psychology classes as part of their course of study at a university located in the lower central North Island. Participation was voluntary and subject to having left school within the previous 14 months. This criterion was set by the researcher in order to obtain a homogeneous group of recent school leavers as these classes were also attended by older students who had been out of the secondary education system for a longer period of time.

Of 168 students who met this criterion, 166 volunteered to participate in the study, with 123 students choosing the option to do so as an alternative to completing part of a regular course requirement. Of the 166 subjects, 157 sets of data were used in statistical analyses. Attrition of subjects was mainly due to inability to attend a session for completion of the final part of the data collection (7 students). Missing information from incomplete sections of the first part of data collection (2 students) also contributed to this dropout. The final sample consisted of 112 (71.3%) females and 45 (28.7%) males with a mean age of 18 years and 6 months ($SD=.804$; range=17.0 - 20.3). The sample included a substantial imbalance in favour of females, which is not representative of the general population of post school students in this age group. However, it is representative of the bias toward the higher ratio of females to males participating in introductory psychology classes at the university.

Students in their first year of tertiary study accounted for 85.3% of the sample. Of these, 123 (78.3%) were at secondary school the previous year, including a small proportion who completed their final year of secondary education through an exchange programme in another country. Eleven (7.1%) had been fully employed prior to undertaking higher education. A further 23 (14.6%) comprised students in their second year of study at a tertiary institution. At the time of the study, all subjects were undertaking a full time study programme at the university, with 67 (42.6%) enrolled for an undergraduate degree course in the Arts; 62 (39.5%) in the Sciences, 18 (11.5%) in Social Work; 7 (4.5%) in Business Studies; and 3 (1.9%) enrolled for an undergraduate diploma or certificate course in the Social Sciences.

The students came from a variety of backgrounds. Fathers generally were fully employed (96.8%) with 41.2% having high, 44.6% medium, and 11% having low socio economic status jobs (Elley & Irving, 1985). Over half (52.3%) of the mothers were in full-time paid employment, 22.9% worked part-time, and 24.8% were homemakers. Of the mothers working full-time, 34.2% had jobs of high socio economic status, 9.8% medium status, and 56.0% were classified as being low socio-economic status (Elley & Irving, 1978). Most (86.1% of the mothers working part-time had jobs of low socio-economic status, the remaining 13.9% worked in jobs classified as medium socio economic status.

The sample included students from a wide range of areas within the North Island. The largest proportion of students came from areas falling either within the perimeter of, or in close proximity to, the lower central North Island. Approximately One third (33.1%) of the sample reported that their home town was within the Manawatu region, 8.3% indicated that they were from the Wanganui area, 12.7% from Hawkes Bay, and 8.9% from Taranaki. The remaining 37% of the sample come from regions that are either in the lower south (including 4.4% from the Wairarapa and 15.7% from Wellington) or from areas within the north and north-eastern regions of the North Island, including Waikato (3.2%), Bay of Plenty (6.7%), the East Coast (3.8%), and Central Auckland and Northland (3.2%).

Accordingly, the sample comprised a homogeneous group insofar as being recent school leavers undertaking an academic route toward the world of work. They are, however, relatively heterogenous with respect to course of study, family socio-economic background, and regional hometown.

4.3 Instruments

4.3.1 Measurement of Career Maturity

4.3.1.1 Career Self-Concept Clarity

As a measure of career self-awareness, scores on the Vocational Identity (VI) scale of the My Vocational Situation (MVS) (Holland, Daiger, & Power, 1980) were used. The authors define vocational identity as "the possession of a clear and stable picture of one's goals, interests, personality, and talents" (p1). The VI scale evolved from research on the correlates of indecision (Holland & Holland, 1977), and was derived from two earlier scales, the Vocational Decision Making Difficulty scale (Holland, Gottfredson, & Nafziger, 1973) and the Identity scale (Grenberger, Josselson, Knerr & Knerr, 1975). According to Holland et al (1980) these two antecedent scales use different item content to measure opposite poles of the same dimension. Items from the two scales were selected empirically to form the Vocational Identity Scale. A detailed discussion of the development of the scale is provided in Holland, Gottfredson, and Power (1980).

The scale (Appendix III C, Section E) consisted of 18 items (for example, "I don't know what my major strengths and weaknesses are", "If I had to make an occupational choice right now, I am afraid I would make a bad choice"), which "measures the clarity of a person's vocational goals and self perceptions..." (Holland, 1985, p28). These items could be answered as either 'true' or 'false' according to the respondent's perceived need for personal knowledge in terms of planning for an occupation or career, including awareness of interests, aptitudes, personal characteristics, and strengths and weaknesses. Items were scored dichotomously, '0' for 'true' responses, '1' for 'false', and summed to obtain a total career

identity score, with low scores indicating confusion about one's identity, and higher scores indicating a clearer sense of identity.

Evidence for the content and construct validity of the VI scale can be inferred from the relationship between item content and decision-making theory (Holland, Gottfredson & Power, 1980), anticipated levels of convergent validity with related measures of ego identity (Savickas, 1985) and level of career maturity (Savickas, 1985; Graef, Well, Hyland, & Muchinsky, 1985), and a factor structure that is relatively consistent with theoretical expectations (Tinsley, Bowman, & York, 1989).

Holland, Gottfredson, and Power (1980) report internal consistency reliabilities (Kudar-Richardson 20) of .86 (high school students), .88 (college students), and .89 (workers) for an early 23-item version of the scale. Reliability estimates for the current 18-item version are reported in Graff, Wells, Hyland, and Muchinsky (1985) to be in the region of .85.

The internal consistency of the 18 item scale was assessed on the present sample with an alpha coefficient of .84. The deletion of one item would have increased the alpha coefficient to .86, but the value in using the full scale for any future comparisons decided against its exclusion.

4.3.1.2 Opportunity awareness, career planning, and decision-making skills

Items assessing the dimensions of planfulness, awareness, and decision-making were selected from the Career Development Inventory-Australia (CDI-A) (Australian Council for Educational Research, 1983). This instrument was derived from Form 3 of the American version (Super, Forrest, Jordaan, Lindeman, Myers, & Thompson, 1979) designed to assess the career maturity of individuals located within the Exploratory and early Establishment phases of Career Development (Super, 1974).

The CDI-A consists of four scales, the Career Planning (CP) scale, Career Exploration (CE), the World of Work Information (WW), and the Career Decision-Making (DM) scale, assessing specific dimensions of career development. Factor analysis at the item, scale, and group factor level (Lokan, 1984) indicate that the CP and CE scales, and the WW and DM scales can be combined to yield two group factors (attitudinal and cognitive) that underlie these dimensions. These composite measures, referred to as the Career Development Attitude (CDA) and Career Development Knowledge and Skills (CDK) scales, reportedly provide a more general level of information about career development attitudes and knowledge (Lokan, 1984). One of the independent scales (CP) and one of the composite measures (CDK, combining the WW and DM scale's) were selected for inclusion in the present study because they matched most closely the career development components of planning, opportunity awareness and decision-making being examined.

Career Planning Scale

The Career Planning (CP) scale (Appendix II C, Section D) assesses the respondent's orientation toward the need for, and usefulness of, career planning. The scale comprised 20 items and covered such aspects as specificity of planning and information on preferred jobs, definiteness of plans, and concern with choice. The items contained four to five response categories ranging, for example, from "I have not thought about this at all" to "I have made definite plans and started to carry them out or know what to do to carry them out". These responses were scored in standard Likert summated rating fashion with high scores indicating attention to the importance of looking ahead and making tentative plans and lower scores suggesting the need for arousal to obtain and use information and for the development of curiosity about careers and the world of work.

Career Development Knowledge and Skills Scale

The World of Work Information (WW) scale (Appendix III B, Section C) assesses the cognitive dimension of career awareness and knowledge of the world of work, including its mores and its occupations. It consisted of 24 multiple choice items, eight of which examined knowledge of the career development tasks in the Exploratory and early Establishment phases (Super et al, 1957; Super & Bohn, 1970). The remaining items examined knowledge of the occupational structure, of sample occupations ranging from semi-skilled to professional, and of techniques for getting and holding a job. These items were scored '1' for correct responses, '0' for incorrect responses, and summed so that a high score indicated such students were aware of the range of occupations open to them and possessed relevant information on occupations and work settings to aid their decisions.

The Career Decision-Making (DM) scale (Appendix III B, Section D), also cognitive in nature, assesses the student's ability to apply decision-making principles. The DM contained 12 multiple choice items. Each of these items involved a brief scenario of an individual confronted with a major career decision, covering a range of educational and occupational levels, and including both traditionally male and traditionally female occupations. As with the items in the WW scale, the DM items were scored dichotomously - correct or incorrect. Students obtaining average or high scores were, presumably, equipped to make effective decisions, while low scorers indicated a need for help in learning strategies for rational decision making, including the identification of a problem, knowledge of what information is required for its solution, and so on.

While a single score was obtained for each subject on the CP, WW, and DM scales, the independent use of the scores from the WW and DM in statistical analysis was restricted, in the present study, to those yielding descriptive information. The composite measure that combines the WW and DM scale scores,

the CDK scale, was used for inferential purposes. This decision was made as the WW and DM scale have demonstrated relatively lower levels of reliability at increasingly higher levels of education (Lokan, 1984). The User's Manual (Lokan, 1984) suggests that this trend is likely to be a function of the restricted range of cognitive performance provided by the WW and DM scales rather than an indication of lower measurement accuracy as such, and recommends the CDK scale for analyses of group differences. The CDK scale has increased reliability, partly because of the cognitive component underlying both the WW and DM scales, but also because of its increased length. The performance range is expanded, thus reducing the constraints of the ceiling effect imposed with the separate use of WW and DM scale scores.

A detailed discussion of the reliability and validity studies, carried out in the norming of the CDI-A, is provided in the User's Manual (Lokan, 1984). Evidence for the content and construct validity of the CDI-A is based on the relation between item content and career development theory, a 2-factor structure that is relatively consistent with theoretical predictions, and expected levels of convergent validity with related measures of identity, motivation, and personality. The internal consistency (alpha) of the CP, WW, and DM scales are reported to be .83, .72, and .65, respectively, for Australian secondary school students (N=489) ranging in age from 15 years to 18 years. For the CDK scale, the Manual reports a coefficient of .81. Lokan notes that the findings from the validation studies of the CDI-A parallel those obtained in the United States for the American version (Super et al, 1979) and are similar to results obtained in the validation of the CDI adapted for other countries. This provides additional support for the use of the CDI-A scales, described here, to measure the career development components of interest to the present study.

Internal consistency checks were run on the present sample resulting in an alpha coefficient of .83 for the Planning scale, .69 for the World of Work information scale, and .51 for the Decision Making scale. The alpha coefficient for the WW and DM scale scores combined (the CDK scale) was .79. The correlation between the WW and DM scales was .5, and the two scales correlated .36, and .27, respectively, with the CP scale.

As the CDI-A was developed for use with secondary school students in Australia, changes to the wording of items 6, 8, and 9, on the CP scale, from present tense to past tense, were made, in order to clarify their meaning for school leavers. On the WW scale, changes to references to specific information sources (items 48 and 49), and to types of educational institutions (items 53 and 54) were necessary, in order to suit the New Zealand situation. This action was taken as no other measure which would assess the students orientation toward the need for and usefulness of planning, or of knowledge of the world of work was available. The CDI-A was written for students of similar age, assessed the dimensions being examined, and, because of the close parallel between the Australian and New Zealand social and economic condition, appeared to be well suited to adaptation for New Zealand students.

4.3.2 Measurement of Career Decidedness

The instrument to measure decision status (Appendix II C, Section D) was taken, with only minor modifications, from Zener and Schnuelle's (1972) Occupational Alternatives Question (OAQ). The OAQ is a measure of expressed career choice, designed to assess the level of career decidedness on the basis of responses to two questions: (a) "List all the occupations you are considering now", and (b) "Which occupation is your first choice? (If undecided, write 'Undecided')". The two parts of the OAQ provide four possibilities in responding: (i) A first choice is listed, with no alternatives; (ii) A first choice is listed, with alternatives; (iii) No first choice is listed, just alternatives; and (iv) Neither a first choice nor alternatives are listed. Slaney (1980) notes that the OAQ has demonstrated adequate discriminatory power to differentiate levels of career decidedness.

The OAQ has demonstrated a high degree of stability. The test-retest reliability of a questionnaire that included this question was .93 (Redmond, 1973) and Slaney (1978) reported a correlation coefficient (Kappa) of .83 for the OAQ across a 6-week interval. Evidence for the criterion-related and construct validity of the OAQ is based on expected levels of concurrent validity with other measures of career indecision (Slaney, 1980), findings that have related expressed choice to predicted outcomes (for example, Monchan & Muchinsky, 1985), and adequate levels of convergent validity with related constructs (Slaney, 1978, 1980; Monchan & Muchinsky, 1985).

There are two methods of scoring the OAQ. One is to classify respondents who have an expressed choice (response i or ii) as decided, and as undecided if they do not (response iii or iv) (Zener & Schnuelle, 1972). A second method, first used by Slaney (1980) is to select four groups, representing decreasing levels of decidedness, according to responses, respectively, to the four possibilities mentioned earlier.

Using the four group classification system in a study with male and female college students (N=323), Slaney (1980), however, found that the OAQ did not adequately discriminate groups of decidedness, as delineated, on measures of decision difficulty and satisfaction with college major and career choice, although significant differences were found between groups who expressed a first choice (response i or ii) from groups who did not have an expressed choice (response iii or iv).

This suggests that classifying subjects who have an expressed first choice, regardless of alternatives (response i or ii), as 'decided', is an appropriate criterion to separate the decided subjects from those who are undecided. However, a similar grouping, using responses c and d to define undecided subjects may not be as suitable. Both theoretical work (for example, Holland & Holland, 1977; Salamone, 1982) and empirical work (for example, Larson, Heppner, Ham & Dugan, 1988; Arnold, 1989) have suggested that career undecided students are a heterogeneous group consisting of multiple subtypes. It would appear

then, that a differentiation of undecided students is important in order to identify, clearly, those who may feel no particular pressure to make a decision, from those who are unable to make a decision. For the present study, this separation was made on the basis of responses similar to the iii and iv response as used by Slaney (1980), although a more stringent criterion was employed in order to ensure that undecided and indecisive groups could be clearly differentiated. For the present study, a preceding filter question was included and only those subjects who responded positively to this question were required to answer the questions adapted from the OAQ as follows:

- (a) Do you have any jobs in mind for when you have completed your education?
- Yes No
- (IF YOU HAVE ANSWERED NO TO THE QUESTION ABOVE, PLEASE GO ON TO SECTION E)
- (b) If you have answered YES to the Question above, please state below what types of jobs you are considering:
- (c) Of the jobs you are considering, which is your first choice? (If undecided, write "undecided").

Thus, question (b) for the present measure corresponded to question (a) of the OAQ; and question (c) of the present measure corresponded to question (b) of the OAQ. This format was not based on any previous research, but it was thought to be important and was included to ensure that groups of students who are relatively clear regarding their career plans, lack a clear preference of career choice, and uncommitted to an occupational goal, could be clearly differentiated. Three career decidedness groups were identified to reflect each respondent's decision status as follows:

Group	Response	Definition
Decided	(b) & (c) A first choice is listed, regardless if accompanied by alternative choices.	A chosen commitment to an occupational goal.
Undecided	(b) No first choice is listed, just alternatives.	Uncertain of an occupational goal.
Indecisive	(a) No jobs are currently being considered.	Uncommitted to an occupational goal.

4.3.3 Measures of Psychological Adjustment

4.3.3.1 Life Satisfaction

The Life Satisfaction scale (Warr, Cook, and Wall, 1979) was chosen as a measure of students' satisfaction with aspects of their environment and everyday life. According to the authors, a primary consideration underlying the development of this measure was that self-reports of satisfaction have been correlated significantly, in various studies, with other indicators of psychological well-being and mental health (Bradburn, 1969; Warr, 1978b; cited in Warr et al, 1979).

Warr et al (1979) define life satisfaction as "the degree to which a person reports satisfaction with salient features of his life and life-space. Total life satisfaction is the sum of all separate items, and overall life satisfaction is reported satisfaction with one's life as a whole" (p133).

Warr et al (1979) report the results of a cluster analysis of the life satisfaction items that differentiate three separate domains of the individual's life assessed by the scale; items 1,2,3, and 4 covering satisfaction with life style; items 5, 6,9, and 10 assessing satisfaction with personal life, (including immediate concerns about health, education, social and family life); and items 7,8,11,12,13,14, and 15 relating to satisfaction with standards and achievement. A further item in Warr et al is a global measure of life satisfaction which correlated .66 with total life satisfaction. The alpha coefficients of the scales were .60 for satisfaction with life style, .59 for satisfaction with personal life, and .81 for satisfaction with standards and achievements. Total life satisfaction (with 15 items in their study) produced an alpha of .78. As items 11 through to 15 (satisfaction with standards) are related specifically to the British situation, they were not included in the present study.

The scale (Appendix II C, Section F) consisted of 11 items. Each item was rated using a scale ranging from 1 (I'm extremely dissatisfied) to 7 (I'm extremely satisfied). Items were scored 1-7, with those relating to the separate domains summed first of all to obtain indices of relative levels of satisfaction, and secondly, as a composite measure of total life satisfaction. An index of overall life satisfaction was obtained from the rating (1-7) on this item (item 11).

Tests of reliability (alpha) for the life satisfaction measure carried out on the present sample were .63 for the life style scale, .59 for the personal scale, and .75 for the two items included from the achievement scale. The alpha coefficient for the ten items combined into a single measure of life satisfaction was .78.

4.3.3.2 Locus of Control

The Internal-External (I-E) scale (Rotter, 1966) was used to measure degree of internality of control (Appendix III B, Section B). According to Rotter (1982) the scale is a measure of a generalised expectancy that outcomes in life are either contingent on one's own behaviour, or independent of it.

The scale consisted of 29 paired statements sampling attitudes in a wide variety of situations, each comparing an internal belief with an external one. Six items (1, 8, 14, 19, 23 and 27) do not relate to the locus of control dimension, but are included as fillers to break up the patterning effect which tends to occur with forced-choice scales (Rotter, 1982).

Information about the reliability and validity of the I-E scale is provided by Rotter (1982). Internal consistency estimates reported for ten different samples (including high school students, college students, and a national stratified sample of American adults) range between .65 and .79. While these values are only moderately high for a scale of this length, they are most likely the by-product of a multidimensional scale rather than an indication of lower measurement accuracy as such. The items are not arranged in a difficulty hierarchy, but are sampling a generalised characteristic across a number of different situations. To support the discriminant validity of the scale, Rotter (1982) reports a median correlation of -.22 with the Marlow-Crowne Social Desirability Scale for different samples of college students, and correlations in the region of .24 and -0.9 with measures of adjustment and intelligence, respectively.

The scale was scored, for the present sample, for the total number of items (excluding filler items) to which the respondent indicated that the more external choice is the truer statement of his or her beliefs. The classification of locus of control followed that as outlined by Rotter (1982) with the grouping of respondents as internals if their scale score was below the mean for the group and as external if their score was higher than the average.

The internal consistency of the I-E scale (with 23 items) was assessed on the present sample with an alpha of .48. Examination of the Pearson product moment correlations between the score for each item and the total score indicated that items 5, 7, and 23 contributed very little to the total score. Item 7 had the weakest relationship with the total score ($r=.09$) and items 5 and 23 correlated .11 and .13, respectively. As a basic requirement for the justification of the use of an instrument in scientific research pertains to its demonstrated ability to measure the phenomenon under investigation, a reduced scale that excluded these three items was chosen in preference to the full scale. The deletion of items 5, 7, and 23 improved the internal consistency of the scale considerably, to .86. The reduced scale correlated -.19 with the life satisfaction items, and -.25 with items assessing self-esteem, indicating a high discrimination between the locus of control scale and the life satisfaction and the self-esteem scales.

4.3.3.3 Self-Esteem

An estimate of the students' general self-esteem was obtained from scores on the Adult Form of Coopersmith's (1975) Self-Esteem Inventory (SEI). Coopersmith (1981) defines self-esteem as "the evaluation a person makes and customarily maintains with regard to him- or herself.... it expresses an attitude of approval or disapproval and indicates the extent to which a person believes him- or herself capable, significant, successful, and worthy" (p5).

The scale (Appendix III B, Section A) consisted of 25 brief statements describing perceptions of self-worth and social competence (e.g. "Things don't usually bother me", "I'm a lot of fun to be with"). Each statement could be agreed with or not according to the respondent's belief that the description was "Like me" or "Unlike me". The scoring of the scale followed that as outlined in the User's Manual (Coopersmith, 1981), with a maximum high self-esteem score of 100.

Noller and Shum (1988) provide information about the validity and reliability of the Adult Form SEI scale. Item-total correlations for all but one (item 10) of the items ranged between .3 and .6, indicating a high degree of internal consistency. For item 10, the authors report a correlation coefficient of .27. Noller et al used discriminant analysis to examine the effectiveness of the items in discriminating between groups scoring highest and lowest on the SEI total score. By comparing responses to the 25 items for the top quartile of subjects with those of the bottom quartile, a highly reliable separation of groups was obtained, indicating that the SEI discriminates well between subjects who are high in self esteem and those who are low in self-esteem.

On the present sample an alpha of .79 was obtained for the SEI scale with no improvement being indicated through the deletion of items.

4.3.4 General Information Questions

In addition to measures of career development, decidedness, and adjustment, a series of general questions, designed by the researcher, were also included in the study in order to obtain descriptive information about the subjects' demographic background, school career/transition education experience, and current situation.

These questions are reproduced in Section A, B, and C of Appendix II C, with the rationale for their development and inclusion given below.

In most cases, these questions provided the subject with a range of alternative (closed) responses, one or more of which they were at liberty to indicate. For questions that required the subject to recall or evaluate past experiences, the closed responses were followed by one open response, to provide subjects the opportunity to express their own opinion. According to Oppenheim (1966, cited in Rosenthal & Rosnow, 1984) the use of open-ended questions in such situations increases the accuracy of responses, as subjects are otherwise forced to choose between given alternatives of which none may be applicable.

4.3.4.1 School Career/Transition Education Experience

Four questions were included in this section to ascertain subjects' experience of school career/transition education. The first was a closed question on whether the student had received careers guidance at school. This was intended to ascertain the proportion of students who acknowledge having received career/transition education at school since few schools do not offer any specifically timetabled career/transition education programmes (Daley, 1990); in addition, career/transition skills courses are generally integrated within core curriculum subjects (for example, Social Studies, English, Economics).

Question 2 was aimed at ascertaining the main types of career/transition education experiences at school. The question included a list of different types of career/transition methods, drawn from those recommended in the "Guidelines for Career Education in Secondary Schools" (as outlined in Appendix B, Department of Education, 1981), and only students who responded positively to Question 1 were required to indicate the methods they had received. The group of closed multiple choice responses were followed by one response alternative to enable students to record additional types of careers education not mentioned in the list provided.

The third question referred to the categories listed in Question 2, and asked respondents to specify the one considered to be the most useful in helping to decide what to do on leaving school. The main purpose of this question was to assess the extent that the type of career/transition education received is acknowledged by students as beneficial in preparing them for the transition from school.

Question 4 consisted of two parts and was designed to ascertain students' views of the career/transition education they received at school. The question opened with a straightforward closed question on whether respondents felt that the career/transition education received could be improved. The second part of the question followed on from this and enlarged upon it, by allowing those who answered positively to the first part, to answer an open question on ways that career/transition education could be improved.

4.3.4.2 Current Situation

An overall picture of the students' situation with regard to factors such as course and level of study was obtained in this section. Also included here was a multiple choice question aimed at ascertaining students' reasons for continuing their education. The question consisted of a number of closed multiple responses, followed by one open response category. From their responses, students were required to choose one main reason for undertaking higher education. As has been shown from the background to this study, unemployment amongst school leavers has become a matter of serious public concern and widespread belief has arisen that there is an even greater need for better qualifications in order to ensure a job. Amongst the multiple choices, a question was included, specifically, to identify the possible relationship between decisions to continue with higher education and the belief that this will lead to better opportunities of obtaining employment. Alternatives related to a perceived link between better qualifications and job satisfaction or higher pay are also included here.

4.4 Procedure

4.4.1 Composition of Measures

The battery of measures, given in Appendix II C and III B, and discussed in detail in Section 4.3 of this Chapter, were collated and presented to subjects in the form of two questionnaires. The first questionnaire was mailed to the subjects and the second was administered, to groups, in a class room at the university, during the week following receipt of the first questionnaire.

The rationale for this procedure was two-fold. Firstly, because of the variety and number of instruments involved, it was not possible to administer them in a single session. The time available was limited to one hour, due to the academic timetable at the university, and it was unreasonable to expect participants to attend a session outside of university hours (which would be the alternative if the instruments were to be completed in one session), particularly for those who lived off campus.

A second issue that was considered in deciding on a method for the collection of data was the anticipated rate of attrition between the first and second stage of data collection. In previous studies conducted at the university, a high rate of attrition is considered to be a recurring problem when the collection of data had included more than one test session with the same subject (Henderson, 1990). In such cases, the subject has been required to attend two or more test sessions. For the present study, therefore, it was thought that a mailed questionnaire, followed by a face-to-face administration, may provide the means to reduce the rate of attrition associated with the multiple data collection method used in previous work. The method of data collection for the present has not, to this writer's knowledge, been employed in any previous research carried out in a university setting. Thus, the method adopted for the present study may also provide a potentially useful alternative for future research using multiple data collection methods in the university setting.

4.4.2 Pilot Testing

Prior to the main survey, preliminary pilot testing of the questionnaire and method of administration were carried out with 24 male and female graduate psychology students. The purpose of this was first, to check the wording and meaning of questions that comprised Section A, B, and C of the Career Development Questionnaire, Part I (that is, questions requesting demographic, career/transition education, and current situation information). Second, to obtain feedback about (a) the presentation of questions in Sections, and (b) the two-step procedure of data collection. Third, to provide the researcher with a practice run

of the administration of the Career Development Questionnaire, Part I and Part II; and fourth, to provide the researcher with feedback concerning the suitability of the content for debriefing subjects in the main survey.

Given the purpose of the pilot-testing, it was considered suitable to arrange for graduate students to be involved as pilot subjects since the nature of the feedback required the level of knowledge and experience of data collection methods and procedures that these students are qualified to provide.

The outcome of the pilot-testing proved to be a valuable contribution to the overall method of data collection for the main survey. In particular, the preliminary administration of Part I and Part II of the Career Development Questionnaire helped to prepare the present researcher for the types of problems that could arise during the main survey, as well as providing an estimate of the time it would take for participants in the main survey to complete both parts of the Questionnaire. The pilot-testing also gave the present researcher an opportunity to rehearse the debriefing of subjects, and the pilot subjects were helpful with regard to suggestions for the inclusion of information about the study. There was general agreement, among the pilot subjects, that the presentation of questions into sections comprising themes helped to focus their thoughts. The general information questions, included in Sections A, B, and C were not seen to be obtrusive, and the pilot subjects' interpretation of these questions were consistent with the present researcher's intent.

4.4.3 Acquisition of Subjects

In order to gain access to classes of students, a departmental research ethics committee (consisting of two course controllers, one laboratory course controller, and one research specialist) screened and approved the research.

Class tutors for the six participant classes were then contacted and it was arranged to approach students at the beginning of class time. All classes were approached during the same week. At this meeting students were informed of the study and invited to participate. It was made clear to students that the researcher was looking specifically for participants who were recent school leavers. It was explained that their participation was voluntary and that data would be treated as confidential. It was also stressed to the students that they should only take part if they were prepared to complete two questionnaires over a period of two weeks. It was explained that the first questionnaire was to be mailed to them and that the second questionnaire was to be administered at the university during the week following receipt of the first questionnaire.

All students were provided with a sheet outlining a range of dates and times available from which to select a session for completing the second questionnaire. They were also administered a participant information form (requesting mailing details, selected date/time for completing the second questionnaire, and signature acknowledging consent to participate). Students were asked to complete this form if willing to participate, and to place their completed form in a box located near the class room door for this purpose. A copy of the administration time sheet and the participant information form is given in Appendix I C and Appendix I B, respectively. A transcript of the meeting is provided in Appendix I A. Students were also given the opportunity to ask questions about the study. At least two days elapsed between the time the last class of participants were approached and the mailing of the first questionnaire.

4.4.4 Data Collection

4.4.4.1 Presentation of Questionnaire One

The first questionnaire was mailed to participants at the address indicated on their participant information form. A cover letter was included with this posting. This letter thanked the recipient for offering to participate in the study, outlined the nature of the first questionnaire, and assured the participant that the information they provided was to be treated as confidential. The letter also requested students to bring their first questionnaire to the administration of the second questionnaire; and provided details on how to contact the researcher, encouraging participants to do this should they have any problems in completing the first questionnaire. A copy of the cover letter is provided in Appendix II A.

In addition to the cover letter, a note (Appendix II B) that confirmed the date, time, and location for completing the second questionnaire accompanied the posting of the first questionnaire. The note also reminded participants to bring the first questionnaire (completed) to the second administration.

4.4.4.2 Presentation of Questionnaire Two

In order to complete the second questionnaire, subjects were required to attend one of twelve sessions scheduled for this purpose. These sessions were held over a period of one week in a class room at the university. Most of the subjects completed their questionnaires in groups ranging from 8 to 15 students in each group. Three students unable to attend the scheduled sessions arranged with the researcher to complete the second questionnaire individually. The three individual sessions were held the following week in the same room that was scheduled for the group sessions. All sessions were supervised by the researcher.

At each session subjects were first of all reminded about the purpose of the study and about the confidentiality of their responses. The second questionnaire was then distributed and subjects were asked not to begin the questionnaire until instructed to do so. Subjects were asked to copy the code number from their first questionnaire on to the cover page of their second questionnaire. This was required to ensure that data from both questionnaires would be collated correctly for each subject. When each subject had completed this task, the first questionnaire was collected.

The subjects were then informed of the nature of the second questionnaire. They were told that the questionnaire consisted of four separate sections representing areas of life related to career development and that it was important to complete all four sections. The subjects were instructed to turn to the first page of the questionnaire and the brief description of each section provided was read out by the researcher, with subjects following as each section was described. Following the descriptions, the subjects were told to attempt all questions within each section, and if unsure of an answer to make the best guess they could. The subjects were informed that there were no right or wrong answers and that it was important for each person to give his/her own opinion. It was also stressed to the subjects to read all instructions carefully before answering the questions in each section. Finally, subjects were asked to remain seated once they had completed the questionnaire. All subjects completed the questionnaire within 30 minutes. Questionnaires were then collected.

At the completion of the session, the students were thanked for their participation and informed that they would receive information about the study later in the year, once preliminary data analyses had been carried out. (A copy of the feedback letter to participants is provided in Appendix IV). In order to minimise possible demand characteristics from students scheduled for consecutive sessions, students were asked to refrain from discussing the content of the second questionnaire with other participants who had not yet attended the session. In order to accommodate for personal career-related issues that may have arisen from participation in the study, students were provided with information about the career guidance and counselling services available both on campus and in the city where the university is located. Students were then provided the opportunity to give feedback and ask questions about the study. Prior to leaving the session, all students received a personalised note (confirming their participation in the study) for exemption from part of a regular course requirement. A copy of this note is provided in Appendix III C.

4.5 Method of Analysis

4.5.1 Processing of the Data

4.5.1.1 Preliminary Editing

The raw data contained in the questionnaires were first of all checked, section by section, for missing data, incorrect responses, data out of range, and inconsistent data. The early detection and correction of errors is an important first step in the processing of data (Jolliffe, 1986) and certainly, this researcher's experience has shown that corrections made as a result of errors found during a computer edit are more costly and troublesome to implement if checks are ignored prior to input of data to the computer. Preliminary checks of the data are also of particular value as a means of getting a feel for the data, in addition to the types of errors occurring.

Data from questionnaires, and mailed questionnaires in particular have long been susceptible to errors resulting from item non-response. A variety of statistical procedures are available to compensate for item non-response, including listwise and pairwise deletion and manual and statistical imputation (Jolliffe, 1986). However, these adjustments also carry with them the possibility of undermining the accuracy of the data. With deletion for example, such efforts may result in a reduced sample size. Arising from this is the risk of attaining differences between subjects who are deleted and those who are not. Thus, a more strenuous effort was adopted for the present study in an attempt to secure a high item response rate. The preliminary editing was carried out as soon as was practicable after the questionnaires were collected and in cases where an error was considered serious enough to effect the final results, the researcher contacted the respondent in an attempt to sort this out.

Of 159 sets of questionnaires collected, errors were found in 11 (6.9 per cent) that were thought to be significant enough to contact the respondent. Ten of the respondents were able to be contacted and seven willingly arranged to meet with the researcher, while queries concerning another two respondents were sorted out over the telephone. The timing of the preliminary editing played a major role in not being able to arrange a meeting with two of the 11 respondents concerned. The week scheduled for the preliminary editing coincided with the end of term and this made it difficult for one student who was busy with end of term assignments. The remaining student had gone home early for the vacation and was unable to be contacted. As a result, that data obtained from these two students was not included in statistical analysis.

4.5.1.2 Coding

Both questionnaires consisted of mainly closed multiple choice responses, and in this case, the raw data formed the coded version. This was decided at the time of designing the questionnaire as an attempt to minimise errors, since coding is a manual operation, but also to provide the opportunity for additional analyses of the data not originally intended, including secondary analyses.

In the case of the open response following some of the closed questions (including B.2, B.4, C.4, E.19, and E.20, in Questionnaire 1), coding was carried out in the following manner. A sample of 70 questionnaires (44.5 per cent) was examined individually in order to ascertain the most common responses to an open question, and the most frequent four to six responses were chosen as the coding frame for that question. This coding procedure enabled the classification of responses into groups of similar responses, although to some extent, this also imposed a structure on the responses. However, due to the nature of the questions (for example, question B.4, requesting students views on how careers education could be improved), a precoded structure may have pushed the respondent toward an expected response, or suppressed the real response (Oppenheim, 1966; cited in Rosenthal & Rosnow, 1984).

Where qualitative data is concerned (questions A3-A9, B.3, C.1, C.3, D.14-D.15, in Questionnaire 1), the coding category was designated before analysis was carried out, coding for these questions was similar to the coding of questions asked in the closed form. The method involved in the categorisation of responses to these questions are discussed in the relevant sections that follow.

4.5.1.3 Input of data to the computer

Once the data had been coded, and the coding checked, questionnaires were then transferred to the university computer centre. The data from each set of questionnaires was entered, variable by variable, on to computer by a trained data input operator.

4.5.1.4 Data Analysis System

All statistical analysis for the present data was carried out with the SPSSX Information Analysis System (SPSSX Users Guide, 1982; SPSSX Advanced Users Guide, 1985) available at the university.

4.5.2 Analysis of Demographic Variables

The data obtained from the demographic questions (Questionnaire One, Appendix II C, Section A) included categorical data (gender of respondents, ethnicity) and continuous or quasi-continuous data (age, parental socio economic status). This information was used, in the present study, for descriptive purposes only, and univariate statistics were sufficient to provide this information.

With regard to Questions 4 and 5 relating to socio-economic status background, parental occupations were coded using the Elley-Irving Socio-economic Index (1985) for males and the Elley-Irving Socio-economic Index (1977) for Female Occupations for females. The higher of the two parents socio-economic status rating was used as an indication of respondents' socio-economic status background. The coding of occupations is a notoriously difficult procedure (for example, Mayo, 1984) and inevitably involves some inaccuracies, as do all attempts at quantification of qualitative data (for example, Jolliffe, 1986). Thus, a degree of subjectivity was involved in allocating occupations to these categories, particularly where the coding of female occupations were concerned. In this instance, the Elley-Irving (1977) lists the great majority of occupations, but did not include all those found in the present study.

4.5.3 Preliminary Analysis of Results

An examination of the composition of the sample by decision status was included in the preliminary analysis of data. The relative decision status of respondents (described in Section 4.3.2 of the present chapter) involved nominal data. Accordingly, the frequency and percentage of respondents in each category was calculated. Subsequent analysis involving this variable was based on the resulting data.

Descriptive and univariate statistics were used to examine the basic characteristics of the career development and adjustment measures. Indices of central tendency, variability, and skewness were calculated for the present data on each of the career development measures and measures of psychological adjustment included in the study.

For the present study, the Vocational Identity, Career Planning, and Career Development Knowledge and Skills scales (the latter derived from the combination of World of Work and Career Decision-Making scale scores) were used as measures of the different dimensions of career development. To assess aspects of psychological adjustment, scores from the Life Satisfaction scale, the Coopersmith Self-Esteem Inventory (Adult Form) and the Internal-External Locus of Control scale were used. Accordingly, some correlation between scores on each of the Career Development, and each of the Psychological Adjustment measures was to be expected. However, these were also expected to be moderate, at the very most, as the instruments included within each category were assumed to measure different components to some degree.

In order to examine the utility of the respective measures of career development and psychological adjustment, scale intercorrelations were calculated for the present data, followed by factor analysis at the scale level firstly, for all the career development measures, and secondly, for all the psychological adjustment measures.

First, however, the adequacy of the data for factor analysis was evaluated. Two recent investigations of the stability of factor solutions were consulted for this task. Arrindell and van der Ende (1985) concluded that the stability of a factor structure is influenced most heavily by the reliability with which the variables are measured and the number of variables in the data set related to each factor. For the present study, a total of 74 variables were included in the measures of career development, and a total of 61 for the measures of psychological adjustment. Following the recommendation of the test developers, a maximum of three scale scores are derivable, in turn, from the career development and psychological adjustment measures. This ratio was considered sufficient for the present study.

Guandagnoli and Velicer (1988) concluded that a total sample of 150 independent cases was sufficient when the factors are defined by four or more variables with loadings greater than or equal to .60. Arrindell et. al. obtained stable factor solutions with samples of 78 and 100 independent cases when an adequate number of reliable variables were analysed. The sample of 157 independent cases included in the present study was thus, considered adequate in satisfying these empirically derived criteria.

In addition to an examination of the extent to which the above instruments tap the different constructs of career development and psychological adjustment, respectively, factor analysis was run on the pool of items within each scale. The aim of the factor analysis was to assess the structure, and the extent to which the empirical structure of the scale for the present data conforms with theoretical expectations.

Both factor analyses used the principal components method of factor extraction with varimax rotation. Five criteria were considered in selecting the optimal number of factors to rotate: the number of factors with eigenvalues greater than 1.00, the scree test, the number of interpretable factors, the amount of variance explained by each factor, and the amount of variance explained by the total factor solution (Tinsley & Tinsley, 1987). The number of factors indicated by each criterion were compared, and the factor solution having the strongest support was rotated.

4.5.4 Analysis of Results

As indicated in Section 4.3.4.2 and Section 4.3.4.3 of the present chapter, a series of general questions relating to career/transition education experience, and reasons for undertaking further education were included, respectively, to provide descriptive information in relation to the research questions addressed in the study (see Chapter Three, Section 3.3). Accordingly, the analysis of responses to these questions was carried out in the context of the respondents' decision status. The data involved was categorical. Thus, contingency analyses were considered suitable in order to assess the relationships of interest here.

Discriminant analysis was chosen to assess the relationship firstly, between career maturity and decision status; and secondly, between decision status and psychological adjustment.

Klecka (1980) classifies discriminant analysis into two main activities, the first involves those statistical applications used for interpreting group differences. The second encompasses statistical activities designed to ascertain the probability of cases falling into a particular group. In the present study, discriminant analysis is employed for the purpose of examining group differences. In effect, the hypothesis pertaining to the relationship of career maturity to career decidedness is asking 'do the groups of decided, undecided, and indecisive students differ from one another on the dimensions of this characteristic, and if so how?' Likewise, the second hypothesis in this study seeks to find out 'if the groups of decided, undecided, and indecisive students differ from one another on dimensions of psychological adjustment, and if so, how?'. In each case, level of decidedness defines the grouping variable, and dimensions of career maturity and aspects of psychological adjustment, respectively, the discriminating variables.

This brings to an end, an account to the methods employed to examine the research questions and test the hypotheses of interest to the present study. Now it is appropriate to assess the deficiencies contained in these methods, some of which have previously been alluded to.

4.6 Methodological Weaknesses

As previously pointed out, it was necessary to present the questionnaires for data collection as early in the year as possible. From the point of view of the research, this timing was necessary since the research programme was limited to 12 months. Obviously, this had a bearing on the nature of the sample accessible to the researcher. It was not possible to arrange and co-ordinate access to a wide range of school leavers and inevitably, the present study utilises a small group from one population, namely, university students. However, it should be noted that this population of school leavers have generally been ignored in existing research on the process of transition from school to work in New Zealand. In this writer's opinion, this

is due to the prevailing but, unfounded assumption that because such school leavers 'succeed' in the academic realm of school, they are 'prepared' for entry to the world of work (for example, see Gordon, 1987, in Korndorffer, 1987; Hawke, 1988; New Zealand Employers Federation, 1981).

According to Coleman (1974; cited in Stevens-Long & Cobb, 1983), academic knowledge alone is worthless unless individuals can relate it to their lives. Thus, young people also need to develop an active sense of direction and responsibility and not just a passive receptivity to information. If university can be seen as a means toward an end, rather than an end in itself, then young people undertaking such a path should also be included in an examination of school leavers' readiness for making career decisions. Nevertheless, the nature of the sample included in the present research will no doubt limit the generalisability of the findings and this issue will be acknowledged again toward the end of this study.

The subjects in this study ranged in age from 17 to 20 years, and in the majority of cases, had moved from their home town in order to attend university (see Section 4.2 of the present Chapter). Although the accuracy and maturity of their responses should not be called into question merely on the grounds of age and the recency of having left their hometown to live in a new city, these factors must be taken into account when considering the reliability of the responses. However, there is no optimum stage in life which confers a greater degree of validity on the self-report of behaviour, opinions held, or which renders subjects fit for research enquiries. The margin of error inherent in any study which relies on human judgement and objectivity for its sources cannot be much greater where the sample in this study are concerned than for any other sample, and the subjects of the present sample generally conveyed a mature and responsible attitude to the study. In an attempt to keep possible bias of this nature to a minimum, the wording of the questionnaires and the issues covered were purposely kept as straightforward as possible, questions were presented in sections to minimise loss of concentration, and the style and format of print for the questionnaires were chosen to maintain the subjects' interest in completing the questionnaires.

The subject of any study is a matter of choice on the part of the researcher, and as such the frame of reference in which such enquiry takes place is largely a subjective matter.

In the present study, the choice of subject, the questions chosen as the framework for the enquiry and the way in which they were couched were inevitably part of a subjective process of selection. Furthermore, in the final analysis, only those results bearing significance for the original research investigation were used, the remainder being discarded. However, this research was planned with the intention of carrying out supplementary analysis at a later date, therefore, the data omitted from the present study is considered to be justified on this basis.

The procedure for quantifying open responses and converting qualitative data into quantitative data has been referred to (see Sections 4.6.1.2 and 4.6.2). There is inevitably some loss of information involved in such methods, and in addition, the researcher cannot totally avoid some degree of subjectivity entering into the choices of coding categorised. Further, in some instances, the inferences contained in some responses had at times to be 'moulded' into one of the already designated similar categories. For instance, in the case of responses relating to the anticipation of job satisfaction as a reason for undertaking higher education (Appendix II C, Section C), a number of responses indicating a desire for intrinsic rewards, such as working with people, or doing something worthwhile, were included, even though job satisfaction as such was not stated.

The foregoing summarises the procedure employed in obtaining and analyzing the results of this study, and assesses the main deficiencies of the research methods. Other shortcomings such as the failure to undertake a follow-up study, which would have offered a further dimension to the work, were to some extent outside the control of the researcher and were the results of the inherent characteristics of an individual research effort. It is hoped, however, that some of the problems encountered during this work and highlighted here will have served to demonstrate pitfalls which others might meet in following similar paths.

CHAPTER FIVE

PRELIMINARY ANALYSIS OF RESULTS

5.1 Composition of Decidedness Groups

As described in Section 4.3.2 of Chapter Four, subjects were asked to indicate whether they had any jobs in mind once they had completed their education, and the question entailed a closed positive or negative response. Those who answered "no" were asked to continue on to the following section, while subjects who answered "yes" were asked to list the types of jobs they had considered. Once this was completed, subjects were asked to choose, from their list of job alternatives, their preferred job. Subjects who indicated a preferred choice were grouped into the 'Decided' category, while those who did not have a preferred choice from their list of alternatives, were grouped into the 'Undecided' category. Subjects who indicated that they had not thought of any jobs they would like to do were grouped into the 'Indecisive' category. Table 5.1 sets out the resulting data relating to subjects' career decision status, and provides the definition of each decision status, as described in Section 4.3.2, Chapter Four.

Table 5.1 Subjects Career Decision Status

Group	Number	Percentage (of sample)	Definition
Decided	68	43.3	A chosen commitment to an occupational goal.
Undecided	63	40.1	Uncertain of an occupational goal.
Indecisive	26	16.6	Uncommitted to an occupational goal.
Total	157	100.0	

5.2 Basic Characteristics of the Career Development and Psychological Adjustment Measures

Table 5.2 sets out the mean, standard deviation, range of raw scores, and indices of skewness, separately, for each of the three measures of career development, and each of the three measures of psychological adjustment included in the present study.

Table 5.2 Basic Statistical Results on the Career Development and Psychological Adjustment Measures included in the present study (N=157).

Scale	Score range	Skewness	Mean	SD
Vocational Identity	0 - 18	-.248	11.0	4.4
Career Planning	41 - 80	-.428	63.0	10.6
Career Development Knowledge and Skills'	17 - 36	-.877	30.8	4.2
Life Satisfaction	28 - 69	-.463	50.0	8.6
Self-esteem	32 - 100	.038	65.6	16.9
Locus of Control	3 - 17	-.079	9.6	3.4

The mean score in relation to the range of scores on the same scale gives, together with the skewness measure for that scale, an indication of the extent to which the distribution of scores depart from a normal (bell-shaped) curve. In the data reported here, values of the skewness index between about -0.5 and +0.5 indicate no significant departure from a normal distribution, as was the case for five of the six scales listed in Table 5.2. The large negative value of the skewness index for the Career Development Knowledge and Skills scale (-.877) demonstrates that the sample, overall, scored very high on this scale. The high mean for the scale (30.8), relative to the maximum score (36) for the scale also indicates that the scale was, on average, rather easy for the present sample. This finding was not entirely unexpected. As discussed in section 4.3.1 of Chapter 4, the CDK scale comprises items considered to be cognitive in nature, and has consistently been found to correlate moderately highly with measures of other cognitive attributes, particularly with measures of academic achievement (Lokan, 1984). Accordingly, the present sample, being university students, represents a group that could be said to fall within the upper levels of the performance range imposed by the scale.

5.3 The Relationship between the Measures of Career Development

Intercorrelations of the career self-awareness, planning orientation, and occupational awareness and decision-making ability variables are shown in Table 5.3. All of the variables were significantly correlated with each other, with the highest coefficient (.53) between career self-awareness and occupational awareness/decision-making ability. However, these are not equivalent constructs, since career self-awareness, as measured here, was a description of one's knowledge of personal goals, interests, and abilities, whilst occupational awareness/decision-making ability was more a measure of one's knowledge of the world of work, and of the ability to apply decision-making principles to this knowledge.

Table 5.3 Intercorrelations and significance levels of the Career Development variables.

	1	2	3
1 Career self-awareness			
2 Planning orientation	.33 (p=.000)		
3 Occupational awareness/ Decision-making ability	.53 (p=.000)	.28 (p=.000)	

A principle components analysis (with varimax rotation) of the scale scores on the Vocational Identity, Career Planning, and Career Development Knowledge and Skills scales supported the distinction between the scales. A summary of the principal components solution is shown in Table 5.4, where the loadings for variables defining each factor are shown in bold type.

The expected three-factor structure, with the factors defined respectively, by the Career Planning scale, the Career Development Knowledge and Skills scale, and the Vocational Identity scale, was well-supported by the results.

Table 5.4. Factor Loadings for the Vocational Identity, Career Planning, and Career Development Knowledge and Skills' scales.

Scale	Varimax Factor Loadings		
	Factor 1	Factor 2	Factor 3
Career Planning	.96	.15	.18
Career Development Knowledge and Skills	.17	.95	.31
Vocational Identity	.21	.32	.94
Eigenvalue	2.021	.675	.301
Percentage of Total Variance	67.4	22.4	10.1

As shown in Table 5.4, each of the scales loaded substantially on only one factor, with correspondingly low correlations with the other factors. Factor 1 explained 94.0 per cent of the variance in career planning scores, 4.7 per cent of the variance in scores on the VI scale, and 3.0 per cent of the variance in scores on the CDK scale. The interpretation of the CP scale as measuring a dimension of career development that is relatively independent of the dimensions assessed by the other two scales is supported by this pattern of results.

A similar conclusion with regard to the CDK scale can be drawn from the pattern of loadings shown on Factor 2. The CDK scale constituted 92.0 per cent of the total variance accounted for by Factor 2. The VI scale played a relatively less important role (13.1 per cent) in determining the nature of Factor 2; while Factor 2 explained only 2.4 per cent of the variance in scores on the CP scale.

The results shown in Figure 5.4 also indicate the factorial independence of the VI scale, 89.3 per cent of the variance in this scale was attributable to Factor 3, with 9.7 per cent and 3.4 per cent of the variance in scores on the CDK and CP scales, respectively, accounted for by this factor.

5.4 The Relationship between the Measures of Psychological Adjustment

The intercorrelations and significance levels of the three measures of psychological adjustment used in the present study are presented in Table 5.5.

Table 5.5 Intercorrelations and Significance Levels of the Psychological Adjustment Variables

	1	2	3
1 Life Satisfaction			
2 Self-esteem	.43 (p=.000)		
3 Locus of Control	-.16 (p=.022)	-.19 (p=.008)	

As seen in Table 5.5, all of the variables were correlated with each other, with the highest coefficient (.43) being between life satisfaction and self-esteem. This is perhaps not surprising given the affective nature of both variables, although conceptually, both represent different dimensions of psychological adjustment. As measured here, self-esteem was a description of self, and life satisfaction was more a measure of reactions to life circumstances. The factor analysis solution (principal components with varimax rotation) is shown in Table 5.6.

Table 5.6 Factor Loadings for the Life Satisfaction, Self-Esteem, and Locus of Control Variables

Scale	Varimax Factor Loadings		
	Factor 1	Factor 2	Factor 3
Life Satisfaction	.80	.31	.12
Self-Esteem	.37	.84	-.07
Locus of Control	.08	-.16	.45
Eigenvalue	2.48	1.64	.619
Percentage of Total Variance	49.7	36.2	14.1

As seen in Table 5.6, the Life Satisfaction scale loaded higher than the others on Factor 1, the Self-esteem scale loaded higher than all the others on Factor 2, and the Locus of Control scale loaded higher than the others on Factor 3. Together, the intercorrelations and factor analyses indicate that the three psychological adjustment measures are getting at independent constructs, as expected. However, the measures used are clearly correlated with one another (see Table 5.5) and the magnitude of the loading of Life Satisfaction (.31) on the Factor defined by Self-esteem (Factor 2), along with the magnitude of the loading of Self-esteem (.37) on the factor defined by Life Satisfaction (Factor 1) suggest imperfect measures underlying the constructs, and hence caution in the interpretation of results using these measures.

5.5 Composition of the Career Development Measures

5.5.1 Vocational Identity Scale

To determine the factors that constitute the Vocational Identity Scale, a principle components analysis was carried out. The five criteria described in Chapter Four, Section 4.6.3, were considered in selecting the optimal number of factors to rotate. Five factors met the eigenvalue criterion and the scree test indicated that three or five factors would be adequate. Examination of the interpretability of the factors and the amount of variance explained by the factor solution suggested three factors as an optimum number of factors to rotate. Once the number of factors was decided, the data were then re-analysed by using principal components analysis with varimax rotation. Table 5.7 presents the VI scale Items along with their associated loadings on each factor for the varimax solution. Eigenvalues and percentages of variance are also included in Table 5.7.

Three items, namely, Items 6, 7, and 17, had loadings larger than .3 on two factors. These items were considered as contributing to the factor on which they had the highest loading. The remaining items had factor loadings larger than .3 on only one of the factors. Factor 1 accounted for 40.2 per cent of the variance in the data and was identified by nine items (Items 2, 3, 6, 9, 12, 13, 15, 17, and 18). Seven of the items on this factor had a loading greater than .60, two items had a loading larger than .50.

Factor 2, accounting for 16.0 per cent of the total variance, was defined by five items (Items 1, 4, 7, 10, 16) all of which had loadings of .50 or greater. Factor 3 accounted for 7.8 per cent of the total variance and comprised four items (Items 5, 8, 11, and 14). Three of these items had loadings of .60 or higher, and the remaining item had a loading of .38.

Analysis of the item content of each factor suggests that the hypothetical construct underlying Factor 1 and Factor 2 approximates Super's (1963) Certainty and Clarity metadimensions of the self-concept, respectively. The latent trait underlying Factor 3 reflected awareness of occupational information. Super (1963) defines certainty as the "confidence with which the subject attributes traits to himself, his conviction as to the kind of person he is" (p23). The items loading highly on Factor 1 all seemed to be concerned with how certain the respondent was about career goals, abilities, and interests (for example, Item 2 'I am concerned that my present interests may change over the years'..... Item 12 'No single occupation appeals strongly to me'..... Item 15 'My estimates of my abilities and talents vary a lot from year to year'). This pattern of factor loadings is consistent with Super's definition of Certainty.

Table 5.7 Factor Loadings for the 18 Vocational Identity Items

Items	Varimax Factor Loadings		
	Factor 1	Factor 2	Factor3
12	.74	.05	.12
3	.71	.17	.04
18	.69	.21	.05
6	.66	.39	.18
9	.64	-.26	.05
15	.64	.17	.17
2	.62	-.11	.13
17	.58	.35	.05
13	.56	.12	.17
4	.19	.73	.06
7	.41	.68	.13
10	-.02	.59	.23
16	.16	.58	-.11
1	.21	.50	.23
14	.07	.15	.74
11	.14	.16	.72
8	.09	-.08	.38
5	.15	-.08	.38
Eigenvalue	7.25	2.89	1.41
Percentage of Total Variance	40.2	16.0	7.8
Number of Items	9	5	4

Clarity is defined as the "sharpness or degree of awareness of an attribute or role" (Super, 1963, p25). The items loading highly on Factor 2 seemed to focus on how clear the respondent's view of self was (for example, Item 1 'I need reassurance that I have made the right choice of occupation'..... Item 4 'I don't know what my major strengths and weaknesses are'.....Item 10 'I'm not sure that my present occupational choice or job is right for me'). The items loading highly on Factor 3 also appeared related to clarity, although in contrast to awareness of personal attributes identified by Factor 2, the content of the items in Factor 3 seemed to focus more directly on how aware the respondent was about occupational issues (for example, Item 5 'The jobs I can do may not pay enough to live the kind of life I want'..... Item 8 'Making up my mind about a career has been a long and difficult problem for me'..... Item 11 'I don't know enough about what workers do in various occupations').

The foregoing results indicate that the Vocational Identity scale is measuring career self-concept certainty and clarity. This is consistent with Holland et al's. (1980) and Holland's (1985) contention that the VI scale measures the stability and clarity of career goals and self-perceptions, and provides strong support for the structural validity of the VI scale.

5.5.2 Career Planning Scale

A principal components analysis carried out on the 20 items that constituted the Career Planning Scale revealed six factors that met the eigenvalue criterion. The scree test, number of factors that were interpretable, and number of factors that explained a meaningful amount of variance all suggested a four factor solution. Consequently, four factors, accounting for 60.2 per cent of the variance were rotated, using the varimax option. The results of the four factor solution are summarised in Table 5.8.

Factor 1 accounted for 27.9 per cent of the variance in the data and was identified by eight items (Item 13 through to Item 20). The content of these items focused on the respondents knowledge about different aspects of a preferred job, including job tasks (Item 13), requirements (Item 14), conditions (Item 15), educational and vocational qualifications (Item 16), access (Item 17), starting pay (Item 18), promotional opportunities (Item 19), and working hours (Item 20).

Factor 2, accounting for 13.4 per cent of the variance, was defined by seven items (Items 1, 2, 3, 5, 9, 10, and 11). Each of these items seemed to be concerned with the extent to which the respondent had thought about, or engaged in, specific career planning activities, such as finding out about educational and job possibilities (Item 1), taking subjects to help decide the line of work to go into (Item 3), sorting out potential problems with future job training or with access to employment in a preferred occupational field (Item 5), and thinking about a career in general (Item 11).

Table 5.8 Factor Loadings for the 20 Career Planning Items

Items	Factor 1	Factor 2	Factor 3	Factor 4
15	.78	.00	-.01	-.27
18	.70	.13	-.13	-.10
16	.67	.31	-.08	.08
19	.66	.02	.15	.01
17	.66	.19	.47	.15
13	.63	.37	.24	.12
14	.57	.13	.33	.37
20	.57	-.35	.22	-.13
1	.05	.72	.09	-.06
10	.01	.71	-.21	.08
3	.01	.64	.15	-.23
5	.34	.63	.13	-.19
9	.18	.60	.32	.33
2	.35	.53	-.04	.28
11	.06	.51	-.49	.45
6	.23	-.07	.72	-.07
8	-.23	.21	.70	.32
7	.22	.34	.55	.33
4	.03	-.15	.07	.77
12	-.13	.00	.06	.66
Eigenvalue	5.57	2.68	2.25	1.51
Percentage of Total Variance	27.9	13.4	11.3	7.6
Number of Items	8	7	3	2

Factor 3 was identified by three items (Item 6, Item 7, and Item 8). Similar to Factor 2, the content of these items were concerned with the extent to which the respondent had engaged in career-related planning activities. However, in contrast to Factor 2, the items loading highly on Factor 3 seemed to focus more on the extent to which the activities engaged in were related to the execution of plans previously thought about (for example, Item 6 'Taking part in activities....', Item 7 'Getting a part-time job....', Item 8 'Getting money to support myself while I'm studying or training....'). Factor 3 accounted for 11.3 per cent of the variance.

Factor 4 accounted for 7.6 per cent of the total variance in the data. This Factor comprised two items, Item 4 and Item 12. The content of these items seemed to be concerned with how clear the respondent was about their career plans. Item 4 focused on the extent to which the respondent had taken subjects at school that were related to further study at a post school institution, or to job training. Item 12 asked the respondent to rate the clarity of their post-education plans. As the Factor was defined by the two items that loaded the highest on it, the pattern of correlations of these two items, with each other, and with other items in the correlation matrix (not shown here) was examined to assess how reliable the factor was. The correlation coefficient between the two items was moderately high ($r=.53$). Both items were relatively uncorrelated with the other items in the data set. The highest coefficient for Item 4 was .23, with Item 14 (assessing the degree of knowledge about abilities required for a preferred job), while Item 12 had the strongest relationship ($r=.31$) with Item 16 (assessing the degree of knowledge about the educational qualifications/training needed for a preferred job). These results indicate that the factor is relatively well defined by the two items.

The Career Planning scale appears to be measuring the nature and degree of career planning that a respondent has engaged in. This is consistent with the intent of the test developers (Lokan, 1984), so these results can be interpreted as indicating the factorial validity of the Career Planning scale.

The scale could, however, be seen to be factor complex, and this should be acknowledged in the interpretation of the results presented here. As demonstrated by Table 5.8, the four factor solution contains items with loadings that range from .30 to .49 on more than one factor. From this perspective, the present results suggest that the structure of the scale is not a simple one. However, if a more stringent requirement of a loading of .50 for including items in a factor is set, the problem of shared loadings is solved. As the foregoing analysis reveals, this criteria was assumed in defining the factors produced by the solution presented here. Only items that loaded higher than .50 on a factor were interpreted as defining that factor. Accordingly, the present analysis reveals a relatively clean four factor structure underlying the scale. Factor 1 was identified as representing the specificity of planning through assessing the degree of information the respondent had about a preferred job. The dimension of career planning orientation represented by by Factor 2 and Factor 3 was found to be similar. The items loading most highly on these factors seemed to be related to the respondent's concern about planning for a job or career. Analysis of the item content however, suggested that while Factor 2 focused on exploratory forms of career-planning activities (for example, Item 1 'Finding out...', Item 3 'Taking subjects to help decide...', Item 5 'Sorting out problems...', Item 11 'Thinking about...'), Factor 3 was focused more on the specification of plans that would be expected to have derived from such planning behaviours as defined by Factor 2 (for example, Item 7 'Getting a part-time job...', Item 8 'Getting money to support myself...'). Factor 4 was specific, and reflected the concern with planning, containing items that were related to the clarity of previous (Item 4) and present (Item 12) career plans.

5.5.3 Career Development Knowledge and Skills

In order to examine the composition of the CDK scale, a principal components analysis was performed on the 36 items derived from the World of Work Information scale (24 items) and The Career Decision Making scale (12 items). Thirteen factors met the eigenvalue criterion, a typical finding when such a large number of items are analysed. The scree test indicated that six or more factors would be adequate. Examination of the interpretability of the factors and the amount of variance explained by the factor solution suggested seven and six factors, respectively, as an optimum number of factors to rotate. Combined, these criteria suggested that somewhere between six and nine factors should be rotated. It was decided to rotate six factors as Factor 6 was interpretable and was thought to be more manageable. Consequently, the data were re-analysed, using principal components analysis with varimax rotation. The results of the six factor solution are summarised by Table 5.9.

Factor 1 accounted for 15.2 percent of the variance in the data and was identified by eight items. The content of all but two of these items (that is, Items 6 and 24) seemed to be concerned with the respondents' knowledge of sample occupations (for example, Item 18 'Computer programmers are commonly trained...', Item 21 'A stockbroker is most likely to use...'). Item 6 focused on the respondents' awareness of career development tasks, while Item 24 focused on knowledge of legislation related to equal opportunities in the workforce.

Factor 2 appeared to be a somewhat general factor that accounted for approximately 12 percent of the variance. Three items from the WWI scale (Items 3, 10, and 12) and four items from the CDM scale (Items 1, 2, 9 and 10) had the highest loading on this factor. Accordingly, the content of the items defining the factor varied from that which seemed to be concerned with the awareness of career development tasks (Item 3), career behaviour (Item 10), and employment opportunities (Item 12) to that concerned with knowledge of strategies for making career decisions.

In contrast, Factor 3 was more specific. The items loading highly on Factor 3 either seemed to be concerned with salient career development tasks (for example, Item 1 'The best way to find out about yourself and the world around you is to...'), or awareness of employment patterns in the workforce (for example, Item 5, 'The reason why many young people change jobs frequently between the ages of 18 and 25 is that...'). One item (Item 14) seemed to be concerned with knowledge of sample occupations. Factor 3 accounted for 10.5 percent of the variance in the data.

Factor 4 was identified by three items from the WWI scale. Two of these items (Item 7 and Item 16) were concerned with knowledge of the occupational structure, the third item (Item 11) that also loaded highly on this factor relates to awareness of career development tasks. Factor 5 was defined by five items, of

which two concerned knowledge of sample occupations (Item 15 and Item 17), a further two, with awareness of career development tasks (Items 2 and 9), and one item (Item 12) from the CDM scale focused on knowledge of strategies for making career decisions. Factor 6 comprised exclusively, items from the CDM scale. No items from the WWI scale had a loading of .30 or higher on this factor. Factors 4, 5, and 6 accounted for 8.6 percent, 7.7 percent, and 5.2 percent of the variance in the data, respectively.

The principle components results discussed above indicate a complex factor structure underlying the CDK scale, and the interpretation of the solution is not quite as clear-cut as that obtained for the vocational identity and career planning measures of career development. As demonstrated by Table 5.9, the six-factor solution contains items from the WWI scale that range from .31 to .39 on more than one factor, although a close examination of these items show that the factors they load on are defined by related items from the WWI scale. Similarly, several items from the CDM scale load higher than .3 on more than one factor, and their loading appears to be associated with a factor already defined by other items from the CDM scale. While the results presented here support the combination of WWI and CDM as an indicator of the world of work and capacity to apply decision-making principles to this knowledge, the complexity of the factor solution nevertheless suggests that more work is required with this scale, to clarify its accuracy for use with New Zealand school leavers. The relatively small amount of variance (53.9 percent) accounted for by the factors discussed here would tend to further reinforce this point.

Table 5.9 Factor Loadings for the 36 Career Development Knowledge and Skills Items

Varimax Factor Loadings						
Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
21	.74	-.10	-.21	.13	-.11	-.08
24	.72	.25	-.05	.04	-.07	-.24
6	.72	-.01	.01	-.01	.09	.27
23	.67	.18	-.03	.11	.04	-.19
19	.63	.05	.08	-.22	.18	.19
22	.59	-.05	.10	.23	-.27	-.14
18	.57	-.13	.08	.11	-.11	.20
20	.49	-.19	-.04	-.05	.34	-.00
3	.03	.79	.02	.28	-.03	-.01
10*	.15	.68	.12	-.04	.16	.30
2*	-.13	.67	.12	-.13	-.01	-.14
9*	.12	.58	-.05	-.01	-.10	.02
1*	.04	.56	-.05	.12	.17	-.27
12	-.03	.48	-.06	-.07	-.06	-.02
10	-.13	.37	-.31	.26	.12	.12
4	-.00	.34	.72	.15	.06	.05
1	.06	-.21	.61	.24	.19	.16
13	-.17	-.14	.58	-.23	-.14	.12
8	-.04	-.24	.52	.10	-.24	.28
5	.05	.31	.45	.28	-.07	-.18
14	-.11	.28	.44	-.31	.14	-.18
16	-.00	.23	.09	.64	-.10	.17
11	.15	-.19	.29	.69	.22	-.04
7	.06	.03	-.00	.54	-.05	.00
17	.28	.14	-.01	.08	.61	.07
2	-.13	-.09	-.01	.25	.51	-.23
9	.18	.14	-.05	.24	-.50	-.22
15	.39	.27	.28	.13	.40	.29
12*	.22	.14	.30	.09	-.35	.02
8*	.10	-.09	.01	.29	-.08	.55
5*	.06	-.05	.03	-.02	-.14	-.51
4*	.06	.20	-.34	-.02	-.17	.38
6*	.06	-.13	.07	.09	-.14	.36
3*	.25	.28	.31	.13	.00	-.35
7*	.02	.01	-.17	.08	-.17	-.31
11*	.00	.19	.12	-.03	-.09	-.30
Eigenvalue	5.5	4.3	3.8	3.1	2.8	1.8
Percentage of total variance	15.2	11.9	10.5	8.6	7.7	5.2
Number of Items	8	7	6	3	5	7

* CDM Scale

5.6 Composition of the Psychological Adjustment Measures

5.6.1 Life Satisfaction

The analysis of the composition of the Life Satisfaction scale used in the present study was based on the a priori expectation that three dimensions of life satisfaction are measured by the scale. In the original validation of the scale, described in Warr et al. (1979), and summarised in Section 4.3.3.1 of Chapter 4 of the present study, three separate components were identified by cluster analysis. These were interpreted by Warr et al. as representing satisfaction with (i) life style, (ii) personal life, and (iii) standards and achievements. A similar structure was also found by Brook and Brook (1989) who included this scale in their investigation of middle managers in New Zealand, and in a subsequent follow-up study (Marshall, 1989) which focused specifically on the relationship between work and non-work satisfaction. Accordingly, for the present study, a principal components analysis, with varimax rotation, was carried out on the 10 items that constituted the total life satisfaction measure used. Item 11 was excluded from the present analysis as this is an index of overall life satisfaction, in contrast to total life satisfaction (see Chapter 4, section 4.3.3.1).

The resulting three-factor solution (summarised in Table 5.10) accounted for approximately 60.0 per cent of the total variance in the data. Factor 1, which accounted for 35.7 per cent of the variance was identified by six items, of which two items (namely, Items 6 and 10) represent Warr et al.'s personal life dimension, while the remaining four items (Items 1, 2, 3, and 4) define Warr et al.'s life style dimension. Factor 2, accounting for 11.9 per cent of the variance, was identified by two items (Item 7 and Item 8), both of which define Warr et al.'s achievement dimension. Factor 3, accounting for a similar amount of variance, 11.0 per cent, also comprised two items (Item 5 and Item 9). Both of these were identified by Warr et al. as a component of personal life.

These results reveal substantial overlap between the items expressing satisfaction with personal life and the items expressing satisfaction with life style. The pattern of loadings for these items, as seen in Table 5.10, further demonstrate the ambiguity of these dimensions for the present data. As shown in Table 5.10, Items 2, 3, and 4 (life style) had similar loadings on Factor 1 and Factor 3 (the latter of which is defined by the two personal life items). Items 6 and 9 (personal life) also loaded highly on both factor 1 and Factor 3. The interpretation of the Life Satisfaction scale as measuring three separate dimensions of the individuals life is not supported by this pattern of loadings. Clearly, the personal life and life style dimensions are not separated in the present data. Accordingly, for the present sample, the life satisfaction items seemed to be reflecting two major dimensions: (i) satisfaction with current life circumstances, including immediate personal concerns as well as style of living, and (ii) satisfaction with past, present, and future accomplishments.

Table 5.10 Factor Loadings for the 10 Life Satisfaction Items

Items	Varimax Factor Loadings		
	Factor 1	Factor 2	Factor 3
10	.77	.13	.14
1	.68	.08	.06
4	.57	.17	.54
2	.54	-.01	.44
6	.45	.10	.42
3	.43	.21	.32
7	.12	.82	-.02
8	.00	.80	.18
5	-.13	.21	.79
9	.45	-.03	.58
Eigenvalue	3.57	1.19	1.09
Percentage of Total Variance	35.71	11.9	11.0
Number of Items	6	2	2

It is possible that the difference between the empirical structure of the Life Satisfaction scale reported here and those found in previous studies (Warr et al., 1979; Brook & Brook, 1989; Marshall, 1989) is a reflection of the scale in picking up differences in life satisfaction related to age and possibly, to employment status. The development of the scale (Warr et al., 1979) was based on a random sample of blue-collar male workers with a mean age of 40 years. In the studies carried out by Brook et al. (1989), and Marshall (1989), the sample comprised male and female middle managers ranging in age from 20 to 59 years, with a mean age of 40 years, with approximately 70 per cent aged between 30 and 39 years. In contrast, the present sample comprised undergraduate students (the majority of whom were recent school leavers), ranging in age from 17 to 20 years. Thus, the two life satisfaction dimensions suggested by the present data may well be characteristic of young university students, whereas older adults employed in the workforce may exhibit the more differentiated three factor structure, as found in previous work with this scale. Clearly, further work is needed to confirm the factor composition of the scale for use with university students.

5.6.2 Self-esteem

A principal components analysis carried out on the 25 items constituting the Self-esteem Inventory revealed nine factors that met the eigenvalue criterion. The scree test, number of factors that were interpretable, and number of factors that explained a sufficient amount of variance all suggested a three-factor solution. Consequently, three factors accounting for approximately 52.0 per cent of the variance were rotated, using the varimax option (see Table 5.11). Accordingly, the relatively small amount of variance accounted for by the solution suggests that caution should be exercised when interpreting the composition of the scale.

Factor 1 accounted for 20.6 per cent of the total variance and was identified by eleven items (Items 1, 3, 4, 7, 10, 12, 13, 15, 17, 23, and 24). Each of these items are descriptions or opinions about oneself (for example, Item 1 'Things don't usually bother me'..... Item 10 'I give in very easily'..... Item 15 'I have a low opinion of myself'..... Item 24 'I often wish I were someone else'). Factor 2, accounting for 17.4 per cent of the variance, was defined by seven items (Items 6, 9, 11, 19, 20, 22). Each of these items describes oneself in relation to one's family (for example, Item 11 'My family expects too much of me'..... Item 16 'There are many times when I would like to leave home'..... Item 22 'I usually feel as if my family is pushing me'). Factor 3 accounted for 13.9 per cent of the total variability in the data, and was also defined by seven items (Items 2, 5, 8, 14, 18, 21, 25). All but one of these items (Item 25) are descriptions of oneself in relation to other people (for example, Item 2 'I find it very hard to talk in front of a group'..... Item 8 'I'm popular with persons my own age'..... Item 18 'I'm not as nice looking as most people'). Item 25 is a description of oneself and had a loading larger than .3 on both Factor 1 and Factor 3.

As demonstrated by the foregoing results, factor analysis of the 25 items that constituted the SEI revealed three latent dimensions of self-esteem underlying the measure. These included attitudes toward the self, attitudes toward the self in relation to family, and attitudes toward the self in relation to others. Similar components were identified by Noller and Shum (1988) and were interpreted as representing Personal, Family, and Social Self-esteem, respectively. The structural validity of the measure, therefore, appears well supported by the present data. The scale is factor complex however, containing items that load on more than one factor. As shown in Table 5.11, Items 8, 13, 17, 18, 21, and 25 have loadings of .3 or higher on Factor 1 and Factor 3. These factors seemed to measure either attitudes toward the self, or attitudes toward the self in relation to others. In addition, Items 16 and 20, describing oneself in relation to one's family, also load highly (.38 and .34, respectively) on Factor 3, which seems to be measuring perceptions of social competence.

Table 5.11 Factor Loadings for the 25 Self-Esteem Inventory Items

Items	Varimax Factor Loading		
	Factor 1	Factor 2	Factor 3
23	.77	-.00	.05
15	.73	.04	.26
7	.70	.26	-.04
3	.64	-.11	.05
24	.50	.12	.02
4	.49	-.22	-.12
1	.47	-.01	.09
10	.34	-.03	-.08
17	.31	.09	.31
12	.30	.00	.00
11	.20	.30	-.15
20	-.04	.73	.34
16	-.13	.72	.38
9	-.02	.66	.10
22	.11	.65	-.19
6	.15	-.34	.22
19	.18	.25	-.04
5	-.15	.17	.66
8	.35	-.09	.66
21	.52	-.10	.62
18	-.30	-.09	.55
2	.00	.24	.53
14	.26	-.09	.39
13	.34	-.10	.30
25	.31	.20	.34
Eigenvalue	5.16	4.36	3.47
Percentage of Total Variance	20.6	17.4	13.9
Number of Items	11	7	7

5.6.3 Locus of Control

A principal components analysis of the 20 items that constituted the measure of internality of control used in the present study was performed to assess the composition of the scale. Eight factors met the eigenvalue criterion. The scree test indicated that five or seven factors would be adequate. Examination of the amount of variance explained by the factor solution suggested seven, and five factors, respectively, as an optimum number of factors to rotate. It was decided to rotate five factors as, although Factors six and seven added substantially to the variance explained by the factor solution, they were, clearly, uninterpretable. Once the number of factors was decided, the data were reanalysed by using principal components analysis with varimax rotation. The resulting five factor solution (summarised by Table 5.12) accounted for 56.4 per cent of the total variance in the data.

Factor 1 accounted for approximately 20 per cent of the total variance and was identified by six items. All but one of these items (namely, Item 18) express a belief about the role of one's self (for example, Item 25(A) 'Many times I feel that I have little influence over the things that happen to me'..... Item 25(B) 'It is impossible for me to believe that chance or luck plays an important role in my life'). Item 18 seemed to focus more on the role of another's behaviour in the outcome of a situation.

Factor 2, accounting for approximately twelve per cent of the variance in the data, was defined by five items. Each of these items seemed to be concerned with general beliefs pertinent to political and social conditions (for example, Item 3(A) 'One of the major reasons why we have wars is because people don't take enough interest in politics'..... Item 3(B) 'There will always be wars, no matter how hard people try to prevent them'..... Item 17(A) 'As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control'..... Item 17(B) 'By taking an active part in political and social affairs the people can control world events').

The items loading on Factor 3 seemed to focus on attitudes about success (for example, Item 16(A) 'Who gets to be the boss often depends on who was lucky enough to be in the right place first'..... Item 16(B) 'Getting people to do the right thing often depends upon ability, luck has little or nothing to do with it'. Factor 3 accounted for approximately 10 per cent of the variance.

Factor 4 and Factor 5 appear to be less clearly defined. Each factor had an item with a loading larger than .3 on the other factor. Factor 4 and Factor 5 accounted for approximately 8 per cent and 7 per cent, respectively, of the total variance in the data. Factor 4 comprised three items that were all concerned with expectations about the role of personal attributes (for example, Item 24(A) 'A good leader makes it clear to everybody what their jobs are'). Factor 5 was identified by two items, Item 4 and Item 6. The content of both items also seemed to focus on beliefs about the nature of attributes in the outcome of a situation.

(for example, Item 6(A) 'Without the right breaks one cannot be an effective leader'..... Item 6(B) 'Capable people who fail to become leaders have not taken advantage of their opportunities').

Table 5.12 Factor Loadings for the 20 Locus of Control Items.

Varimax Factor Loadings.					
Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
28	.91	-.12	.00	-.01	.07
15	.90	-.12	.00	-.01	.07
18	.74	-.05	-.09	.25	-.11
25	-.73	.03	.20	-.12	.17
13	.39	-.18	-.25	.08	-.14
9	.36	.17	.10	-.22	.21
17	.02	-.83	.09	.05	.22
22	-.27	.72	-.20	-.04	.10
12	-.04	.55	.20	-.06	-.02
3	-.16	.54	.13	.17	-.21
29	-.01	.40	.00	-.02	.14
2	.10	-.04	.72	.09	.10
16	-.06	-.01	-.70	-.15	-.23
11	-.12	.24	.66	-.24	-.18
21	.21	-.26	-.51	-.09	.13
20	-.10	.07	.08	.88	.26
24	.11	-.16	.09	.78	.31
26	.04	.15	.01	-.76	-.22
4	.26	-.21	.00	.33	-.71
6	-.16	.07	.08	.24	.69
Eigenvalue	3.95	2.36	1.93	1.61	1.39
Percentage of Total Variance	19.8	11.8	9.7	8.1	7.0
Number of Items	6	5	4	3	2

The correlation between Item 4 and Item 6 was moderately low ($r=.29$). An examination of the pattern of correlations between the two items and the other items in the set suggested that the factor was not reliable. The correlation coefficients between Item 4 and the remaining items ranged from low ($-.27$) to moderate ($.59$), with the largest coefficient being between Item 4 and Item 24. The pattern of correlations between Item 6 and the remaining items was also similar. The coefficients ranged from low ($r=-.21$, with Item 18) to moderate ($r=.42$, with Item 16).

These results suggest only a partially simple structure underlying the present data. Factors 1, 2, and 3 are relatively well defined by the items that correlate most highly on them. The items defining Factor 1 had loadings that ranged from .36 (Item 9) to .91 (Item 28) on this factor. These items had very small loadings on the remaining factors. The five items defining Factor 2 had loadings of .40 or higher on this variable, and only negligible loadings on the other four factors. Factor 3, similarly, had four items loading highly on the factor, and correspondingly low correlations with the other factors. Factor 4 and Factor 5, in contrast, were less clearly defined. The pattern of loadings on these two factors, along with an analysis of the content of the items suggest that both factors are reflecting similar dimensions of locus of control. The scale then, appears to be assessing the degree of internality of control across four different situations. These include, situations that directly involve the individual (Factor 1), situations that are distal to the individual, including the wider social and political environment (Factor 2), situations that are proximal to, but do not directly involve, the individual and are related to beliefs about success (Factor 3) and situations that are also proximal to the individual, but focus more on the role of beliefs about personal attributes in the outcome of life experiences (Factor 4 and Factor 5).

The foregoing analysis indicates that the locus of control scale is multidimensional, as was the intent of Rotter (1966). This would tend to support the structural validity of the scale, however, it is clear that further work is needed to confirm the factor composition of this scale and possibly to purify its factor composition. This is particularly relevant in light of the fact that the current analysis was based on a reduced scale (see section 4.3.3.3, Chapter 4), that comprised 20 of the original 23 items.

CHAPTER SIX

RESULTS

6.1 Career/Transition Education Experience

A central theme of the research was to examine the career development of school leavers, and to assess the extent to which relative levels of career development (career maturity) are related to the clarity of future career plans. This first section of the present chapter looks at an important precursor of career development, namely, career education experience. The questions posed to subjects (Appendix IIc, Section B) were designed to gain an insight into the nature of career education methods received by young people during their secondary school years, and to assess the extent to which this experience has been useful in helping them to decide what to do on leaving school. Accordingly, the data are examined in relation to subjects' decision status, as defined in section 4.3.2 of Chapter 4, and based on the resulting data provided in section 5.1 of Chapter 5.

6.1.1 Career/ Transition Education Received

Subjects were asked to indicate whether they had received career guidance, and the question entailed a closed positive or negative response. Table 6.1 sets out the figures obtained for each career decidedness group.

The data presented in Table 6.1 show that the substantial majority (96.8 per cent) of subjects in the present sample acknowledge having received some form of career education while at secondary school. Within each decidedness group, the overall response rate on this issue was also positive. Of the 68 subjects who are relatively clear regarding their future career goals, 67 (98.5 per cent) indicated having received career education, while 59 out of 63 (93.6 per cent) of those uncertain of an occupational goal reported likewise. The highest positive response rate for this question was from subjects who are uncommitted to an occupational goal, of whom all 26 indicated having received some form of career education.

Table 6.1 The Number of Decided, Undecided and Indecisive Subjects
Who Received Career/Transition Education at Secondary School.

Decidedness Group	Career Guidance Received			
	Yes	No	Total	
Decided	67	1	68	(43.3%)
Undecided	59	4	63	(40.1%)
Indecisive	26	0	26	(16.6%)
Total	152 (96.8%)	5 (3.2%)	157	(100.0%)

6.1.2 Methods of Career/Transition Education Received and Subject Preferences

Subjects were asked to indicate the methods of career education they received at secondary school, and to choose the one method they considered to be the most useful in helping them to decide what to do on leaving school. The data resulting from these questions are provided in Table 6.2, and Table 6.3, respectively.

It is demonstrated by Table 6.2 that written information, visits to various work establishments (including tertiary institutions), and parental guidance were overall the most widely experienced methods of career education for the present sample, with 91.4 per cent, 83.5 percent, and 79.6 per cent of subjects, respectively, indicating these categories. However, while the number of subjects who received written information and parental guidance was similar across each career decidedness group, this was not the case for those who had experienced visits to various work establishments. As shown in Table 6.2, all of the subjects within the undecided group (100 per cent) reported having received this method of career education, compared to 77.6 per cent from the decided group, and 61.5 per cent from the indecisive group. This difference within groups also points to the possibility that the overall higher proportion of subjects experiencing visits to work establishments, relative to the overall proportion receiving parental guidance, may be somewhat distorted by the results for the undecided group.

Table 6.2 Career/Transition Education Methods Received by Career Decision Status of Respondents

Methods	Decidedness Group			Total N = 152
	Decided N = 67	Undecided N = 59	Indecisive N = 26	
Work experience/work exploration	19 (28.3)*	21 (35.5)	4 (15.3)	44 (28.9)
Visits to workplaces/ tertiary institutions	52 (77.6)	59 (100.0)	16 (61.5)	127 (83.5)
Careers evenings or similar functions	44 (65.6)	51 (86.4)	9 (34.6)	104 (68.4)
Books, pamphlets, etc.	63 (94.0)	54 (91.5)	22 (84.6)	139 (91.4)
School guidance counsellor/ careers advisor	26 (38.8)	43 (72.8)	11 (42.3)	80 (52.6)
Parents/guardians	53 (79.10)	49 (83.0)	19 (73.0)	121 (79.6)
Other	13 (19.4)	26 (44.0)	3 (11.5)	42 (27.6)

*(a) Figures in brackets relate to percentages of career/transition education received - see Table 6.1

*(b) As career/transition education method is a multiple response variable, a respondent may appear in more than one cell within a column.

Careers evenings (or similar functions) were experienced by 68.4 per cent of the sample who reported having received career education, with the largest number, again, representative of the undecided group (86.4 per cent). Visits from representatives of various organisations played a relatively minor role for those within the indecisive group (34.6 per cent), while the decided group took on an intermediate position; 65.6 per cent of subjects from this group reported that they had received this method of career education.

Just over half (52.6 per cent) reported having received personal careers guidance from a school counsellor or careers advisor. Variations within decidedness groups however, are also apparent here. Whereas 68 per cent of the subjects from the undecided group indicated this category, less than half (42.3 per cent) of the subjects from the indecisive group stated that they had received any such guidance. For the decided group, this was the case for just over a third (38.8 per cent) of subjects.

Of the 152 subjects who indicated that they had received some form of career education, 44 (28.9 per cent) reported having experienced short-term employment induction/experience. As shown in Table 6.2, this included over one third (35.5 per cent) of the subjects from the undecided group, and just over a quarter (27.9 per cent) of subjects from the decided group. Work exploration and/or work experience was experienced even less by subjects from the indecisive group, with only 4 out of the 26 subjects in this group (15.3 per cent) indicating this category.

The category 'Other' percentage was composed mainly of having had some contact with a university liason officer, videos relating to job areas or general career matters, television programmes or advertisements, and structured class sessions. Seventeen subjects (40.1 per cent) in this category indicated contact with a university liason officer (of which 5 subjects were from the decided group, 9 from the undecided group, and 3 from the indecisive group); 10 subjects (23.8 per cent) indicated videos (3 from the decided group, 7 from the undecided group); 6 (14.2 per cent) mentioned television programmes or advertisements on television (including 3 from each of the decided and undecided groups), and 6 subjects (all from the undecided group) indicated having received structured class sessions focused on job application skills, including writing skills and interviewee presentation. In addition, two subjects (one from each of the decided and undecided groups) mentioned a family member apart from parents/guardians as a source of careers guidance, and one student (from the decided group) mentioned regular notice board displays at the school library.

Overall, each subject from the present sample, who had indicated that they had received some form of career education during their secondary school years, experienced, on average, a combination of at least four of the methods mentioned above. Each student within the decided group reported an average of 4 different methods, with the most commonly experienced forms of career education for this group being from written sources, and guidance from their parents/guardians. Each student within the undecided group received an average of 5 of the methods of career education covered here, of which visits to various work establishments was the most frequently reported, followed by information from written sources. Subjects within the indecisive group, in comparison, received only an average of 3 different methods of career education. The most frequently received method of career education for subjects from this group was from written sources, followed by guidance or advice from their parents/guardians. Of the 152 subjects in the sample who had indicated that they had received some form of career education, 128 (84.2 per cent) were able to report the method considered the most useful in helping to decide what to do on leaving school. The remaining 24 subjects (15.7 per cent) either did not respond to this question (5 subjects) or, indicated that they had not found any of the career education methods they had received to be useful in helping them to decide what to do on leaving school (19 subjects). The following is, therefore, based on the responses of 84.2 per cent of the subjects who had reported that they had received career education during their secondary school years.

It was revealed in Table 6.2 that the majority of subjects received written information, the opportunity to visit various work establishments (including tertiary institutions) and career-related guidance or advice from their parents/guardians. However, the data presented in Table 6.3 shows that, of the subjects who experienced them, only 10.0 per cent found written information to be the most helpful in deciding what to do on leaving school, 22.0 per cent stated that visits were the most helpful, and just under a third (32 per cent) who had received guidance or advice from their parents/guardians indicated that this was the most helpful source.

Table 6.3 Preferred Method of Career/Transition Education by Career Decision Status of Respondents

Methods	Decidedness Group			Total N = 152
	Decided N = 67	Undecided N = 59	Indecisive N = 26	
Work experience/work exploration	11 (57.8)*	4 (19.0)	0 (0.0)	15 (34.0)
Visits to workplaces/ tertiary institutions	3 (5.7)	14 (23.7)	11 (68.7)	28 (22.0)
Careers evenings or similar functions	2 (4.5)	4 (7.8)	0 (0.0)	6 (5.7)
Books, pamphlets, etc.	10 (15.8)	3 (5.5)	1 (4.5)	14 (10.0)
School guidance counsellor/ careers advisor	7 (26.9)	5 (11.6)	5 (45.4)	17 (21.2)
Parents/guardians	23 (43.3)	10 (20.4)	6 (31.5)	39 (32.2)
Other	2 (15.3)	7 (26.9)	0 (0.0)	9 (21.4)
None/No Response	9 (13.4)	12 (20.3)	3 (17.5)	24 (15.7)

*(a) Figures in brackets relate to percentages of methods received - see Table 6.2

However, Table 6.3 also shows that there are wide group variations according to the relative usefulness of these methods. Whereas just under one half (43.3 per cent) of the subjects in the decided group who had received careers guidance or advice from their parents also reported that this method was the most helpful, this was the case for only about one third (31.5 per cent) from the indecisive group, and less than

one quarter (20.4 per cent) of those from the undecided group. Of subjects from the indecisive group, over two thirds who experienced visits to various work establishments, including tertiary institutions, also found this to be the most useful method in helping to decide what to do on leaving school. This is compared to less than one quarter (23.7 per cent) of subjects from the undecided group who also received this method, and only 5.7 per cent (3 out of 57) from the decided group.

Thus, of the three most frequently received methods of career education, parental/guardian guidance was considered the most helpful for subjects from the decided group, and visits were reported to be the most helpful for those from the indecisive group. Although subjects from the undecided group reported both guidance or advice from their parents/guardians and visits to be helpful, this was only the case for less than a quarter of those who received these methods.

Although a substantial number of subjects had also attended careers evenings, only 5.7 per cent specified this to be the most helpful source. This included 4.5 per cent (2 out of 44 subjects) from the decided group who received this method, and 7.8 per cent (4 out of 59 subjects) from the undecided group. Of the 9 subjects (39.1 per cent) from the indecisive group who reported having attended a careers evening (or similar function), none have indicated that this was the most helpful method of career education.

Over half of the subjects had received personal careers guidance from a school counsellor or career advisor, however, as seen in Table 6.3, less than one quarter (21.2 per cent) reported having found this source the most helpful in deciding what to do on leaving school. Again, however, there are substantial group variations. Almost half (45.4 per cent) of the subjects from the indecisive group who received this method of career education also reported that it was the most helpful, compared to just over a quarter (26.9 per cent) from the decided group, and 11.6 per cent from the undecided group.

While short-term employment induction/experience was less frequently received by subjects overall, over one third (34.0 per cent) of those who did experience this method of career education found it to be the most helpful, with subjects from the decided group indicating a greater preference for this method than subjects from the other two groups. Whereas over one half (57.8 per cent) of those from the decided group who received this method of career education also reported that it was the most helpful, this was only the case for less than a quarter (19.0 per cent) from the undecided group. There were no subjects from the indecisive group that reported this method to be the most helpful in deciding what to do on leaving school.

Of the subjects who specified additional forms of career guidance, 3 out of the 17 (17.6 per cent) who had indicated contact with a university liaison officer (this included 3 from the undecided group) also reported that this was the most helpful method, representing one third of the subjects in this category. Just over

half (including 1 student from the decided group, and 3 subjects from the undecided group) of those who had mentioned television programmes or television advertisements as a source of career education, specified that this was the most helpful method. Three of these subjects noted, in particular, advertisements endorsing the importance of education. Two subjects (one from each of the decided and undecided groups) in this category indicated that they had received career advice from a family member apart from their parents/guardians. Both of these subjects also reported that this was the most useful source in helping them to decide what to do on leaving school. There were no positive responses recorded for the remaining methods of career-related videos, job application skills, and displays that had also been included under this category.

6.1.3 Views on Career/Transition Education Received

Subjects were asked to indicate their views on the career/transition education they had received by reporting whether or not career guidance could be improved. An open question followed on from this and provided those who answered positively to this question the opportunity to state ways in which they felt that career guidance could be improved. Table 6.4 shows the extent to which subjects felt improvements needed to be made and Table 6.5 (which follows) sets out the results obtained from the open question relating to subjects suggestions on how career/transition education could be improved.

Table 6.4 Indication of the Need for Improvement in Career/Transition Education by Career Decision Status of Respondents

Decidedness Group	Improvements in Career/Transition Education		
	Yes	No	Total
Decided	49	18	67 (44.1)*
Undecided	41	18	59 (38.8)
Indecisive	24	2	26 (17.1)
Total	114 (75.0)	38 (25.0)	152 (100.00)

*(a) Figures in brackets are based on percentages of career/transition education received

As can be seen from the analysis of responses presented in Table 6.4, the majority of subjects felt that improvements needed to be made to the nature of career/transition education provision. Responses for both the decided and undecided groups were similar to the overall sample in that almost 75 per cent from each group indicated the career/transition they received could be improved. Likewise, the majority from the indecisive group felt that career/transition education provision could be improved, with only 2 (7.7 per cent) of the 26 in this group reporting otherwise.

Table 6.5, relating to areas where subjects felt improvements could be made, revealed three common responses relating to work experience, information, and career counselling/advice. Ninety-five per cent of those who responded to this question felt that career/transition education provision could benefit from more up-to-date information, over half (63.1 per cent) indicated the need for more information about job requirements, while a similar percentage (53.5 per cent) mentioned the need for more information about the types of jobs that are available to them.

The majority of subjects (91.2 per cent) suggested that career/transition education provision was too impersonal, in that it aimed at offering general rather than individual advice.

Most indicated that career/transition education could be improved through the inclusion of more work experience opportunities (78.9 per cent), and a quarter (26.3 per cent) mentioned the need for more time in a work experience/exploration placement.

In the area of career counsellor/advisor, almost one-third (65.7 per cent) mentioned the need for a more experienced career counsellor/advisor. A general comment from subjects in this category was that the career counsellor/advisor at their school knew very little about the types of jobs that interested them or about the types of jobs that might be available to the student. Just under half (42.9 per cent) felt that career/transition education could be improved through being able to have more access to a career counsellor/advisor. Many of the subjects in this category noted that the staff member in this position also had teaching responsibilities which meant that a career counsellor/advisor was only available to them for a limited period of time.

In general, the percentage of subjects within each decidedness group that indicated areas of improvement were similar to the overall percentage of responses as to possible areas of improvement. More subjects from the decided group however, felt that improvements needed to be made in the nature and availability of information required for particular jobs, both when choosing options and when preparing for the world of work. A higher percentage of subjects from this group also indicated that they would welcome (more) work experience and a greater length of time in a placement. With regard to career counselling/advice, a higher percentage of subjects from the undecided group expressed both the need for greater access to

a counsellor/advisor, and for more experienced personnel in this area. More subjects within this group also felt that career/transition education provision could benefit from a greater focus on the individual.

Table 6.5 **Suggestions for Improvement in Career/Transition Education
by Career Decision Status of Respondents**

Improvements	Decidedness Group			
	Decided N = 49	Undecided N = 41	Indecisive N = 24	Total N = 114
More work experience/ work exploration	43 (87.7)*	31 (75.6)	16 (66.6)	90 (78.9)
More time in a placement	17 (34.6)	13 (31.7)	0 (0.0)	30 (26.3)
More information about job requirements	39 (79.5)	20 (48.7)	13 (54.1)	72 (63.1)
More information about the availability of jobs	32 (65.3)	19 (46.3)	10 (41.6)	61 (53.5)
More current, up-to-date information	49 (100.0)	41 (100.0)	19 (79.1)	109 (95.6)
Should be aimed more at the individual	43 (87.7)	40 (98.6)	21 (87.5)	104 (91.2)
More experienced counsellor/ advisor	22 (44.8)	30 (73.1)	11 (45.8)	75 (65.7)
More access to a counsellor/ advisor	7 (14.2)	33 (80.4)	9 (37.5)	49 (42.9)
Other	5 (10.2)	9 (21.9)	4 (16.6)	18 (15.7)

*(a) Figures in brackets are based on percentages of improvements in career/transition education provision - see Table 6.4

*(b) As areas of improvement in career/transition education is a multiple response variable, a respondent may appear in more than one cell within a column.

6.1.4 Reasons Given for Undertaking Higher Education

Subjects were offered a number of closed multiple choice responses pertaining to reasons for undertaking higher education, followed by an open response. From their responses, subjects were asked to choose the one main reason for continuing with their education. The resulting data are included in Table 6.6.

Table 6.6 Main Reason Given for Undertaking Higher Education
by Career Decision Status of Respondent

Reason	Decidedness Group			Total N = 157
	Decided N = 68	Undecided N = 63	Indecisive N = 26	
Parent's expectations	4 (5.8)*	12 (19.0)	5 (19.2)	21 (13.3)
Satisfying job	19 (28.1)	27 (42.9)	9 (34.7)	55 (35.0)
Better paid job	2 (3.0)	3 (4.8)	1 (3.8)	6 (4.1)
More likely to get a job	11 (16.1)	3 (4.7)	1 (3.8)	15 (9.5)
Don't know	0 (0.0)	7 (11.1)	1 (3.8)	8 (5.0)
Other	32 (47.0)	11 (17.4)	9 (34.6)	52 (33.1)

*(a) Figures in brackets are based on total sample - see Table 5.1, page 64

Table 6.6 shows that the subjects, overall, placed more importance on the anticipation of job satisfaction (35 per cent) than any other reason for undertaking higher education. This, too, was the most popular reason given by subjects from the undecided and indecisive groups. Twenty-one (13.3 per cent) subjects in the sample felt that their parents had been the most influential in their decisions to go to university, although this was seen as less important for those in the decided groups (5.8 per cent) than was the case for those in the undecided group (19.0 per cent) and the indecisive group (19.2 per cent).

A number of subjects (15 subjects) indicated the prospect of a job as the most influential reason for continuing their education. However, an examination of Table 6.6 reveals that this was more important for those within the decided group (11 subjects) against three from the undecided group and one from the indecisive group.

Eight subjects mentioned that they did not know why they had chosen to attend university, representing 5 per cent of the sample. Of these, 7 (11.1 per cent) were from the undecided group, and one was from the indecisive group.

As far as the desire for good pay was concerned, this appeared to be most important for only a few subjects in the sample, with 3.8 per cent having mentioned this category. A similar percentage of subjects within each career decidedness group indicated this as the main reason for undertaking higher education.

One third of the sample (33.1 per cent) mentioned a reason, other than those provided in the closed response categories, as the most influential in their decisions to undertake further education. Of these, 15.2 per cent mentioned factors to do with requirements for a preferred occupation. This response included only those from the decided group (24 subjects). Almost 10 per cent of the sample indicated the desire to continue learning as the main reason for attending university, including 8 (11.7 per cent) from the decided group, 6 (23 per cent) from the indecisive group, and one student from the undecided group. A further 4.4 per cent felt that there was no other option but to attend university. This percentage of the sample included only those from the undecided group, and represented 11.1 per cent (7 subjects) of those in this group. Three per cent of the sample mentioned that advice from a school teacher and/or career advisor had been the most influential in their decision to undertake further education (including 3 subjects from the undecided group, and 2 from the indecisive group). In addition, one student (from the indecisive group) reported that the main reason for attending university was because friends were also attending.

Overall, the foregoing reveals the most influential reason given by subjects (in the present sample) for continuing their education is the belief that higher education will lead to a more satisfying job. In the case of subjects within the decided group however, anticipation of job satisfaction was preceded by factors related to the requirements of preferred jobs as the most important reason for attending university. For subjects from the undecided groups, parental expectations followed job satisfaction as the main reason for attending university, whereas for those within the indecisive group, the desire to continue learning represented the second most common reason for attending university, next to the likelihood of obtaining job satisfaction.

6.2 The Relationship between Career Development and Career Decidedness

Scores on the Vocational Identity, Career Planning, and Career Development Skills and Knowledge scales were used as predictors of decision status, in a direct discriminant function analysis, to assess the relationship between career development and career decided, undecided, and indecisive subjects.

Two discriminant functions were calculated, with a combined Chi-square (6)=60.941, $p < .001$. After removal of the first function, there was still strong association between groups and predictors, Chi-square (2)=19.611, $p < .001$. This indicates two dimensions by which decidedness groups can be reliably separated. Subsequent analyses were therefore carried out for both discriminant functions.

In order to measure the degree of relationship between the discriminant functions (representing successive orthogonal combinations of scores on the predictor variables) and the groups (decision status), canonical correlations were examined.

The canonical correlation between the first discriminant function and decision status was moderate (.515), indicating 26.6 per cent of variance shared between groups and predictors on this function. The canonical correlation between groups and predictors was lower on the second function (.331), representing 11.0 per cent of shared variance. The two discriminant functions accounted for 74.5 per cent and 25.4 per cent, respectively, of the variability between the groups of decided, undecided, and indecisive subjects.

To measure the way by which both discriminant functions separate groups, the mean discriminant score (centroid) for each group, on each function, was examined. For the present data, the three group centroids had the following location, in order from decided to indecisive groups, on the first and second function: (1.642, 1.905)(-.5587, -.2347)(-.5305, .4672). To better visualise the relative position of groups on each function, centroids plotted along axes formed by both discriminant functions are shown in Figure 6.1.

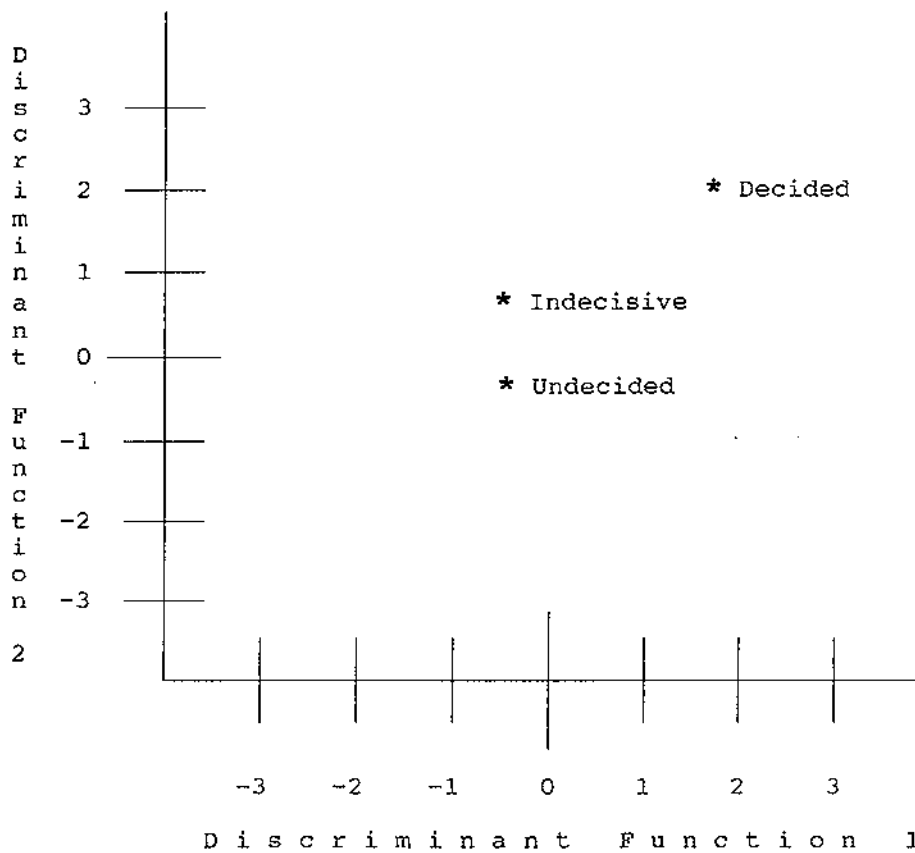


Figure 6.1 Plot of Decided, Undecided, and Indecisive Group Centroids (Means) on Two Discriminant Functions Derived From Measures of Career Development.

As Figure 6.1 illustrates, the first function maximally separates career decided subjects from the other two groups. Undecided and indecisive subjects hold nearly the same positions on the first function. They are different, however, on the second function, being at opposite ends of the continuum concerning level of career development. The pattern of group means on the second discriminant function indicate reasonably well-defined boundaries between the groups of decided, undecided, and indecisive subjects.

Identification of which variables contribute most to a discriminant function can be made through the examination of standardised and structural coefficients. Standardised coefficients provide an index of the relative contribution of each variable to the discrimination amongst groups, while structure coefficients indicate how closely a variable and a function are correlated. Further insight into this relationship can be gained from comparison of each groups average score on that variable. An estimate of how groups differ on the variables discriminating amongst groups is provided by the group mean for that variable. Table 6.7 sets out the standardised and structural coefficients calculated for the present data on both discriminant functions. The mean and standard deviation (in parentheses) for each group on each of these predictors are given in Table 6.8.

Table 6.7 **Standardised and Structural Canonical Discriminant Function Coefficients for Each of the Career Development Variables**

Variable	Standardised Coefficients		Structural Coefficients	
	FUNCTION 1	FUNCTION 2	FUNCTION 1	FUNCTION 2
Self awareness	.8905	-.6941	.8504	-.4831
Planning orientation	.5333	.9459	.6373	.7377
Opportunity awareness & Decision-making skills	-.3514	-.0524	.4490	-.2569

The standardised coefficients for the first discriminant function, as seen in Table 6.7, indicate that the most important predictors separating career decided subjects from the undecided and indecisive groups, in the present sample, were the clarity of career goals and self perceptions (.8905) followed by awareness of the need for, and usefulness of planning (.5333). Knowledge of the world of work and the ability to use this information to make decisions about one's career (-.3514) played a relatively smaller role in the pattern of separation amongst groups on this function.

It has been suggested by Klecka (1980) that structure coefficients greater than, or equal to, .30 be treated as meaningful. On the basis of this criterion, the structure coefficients calculated for the present data on the first discriminant function indicate all three variables are making an important contribution to the separation of decided subjects from the undecided and indecisive groups. As seen in Table 6.7, opportunity awareness and decision making had the lowest correlation (.4490) with this function. As all three variables refer to different dimensions of career development, the relative magnitudes of the structure coefficients on the first function indicate that the separation of the decided group from the undecided and indecisive groups reflects primarily their differences in career development.

The group means on the three predictors, shown in Table 6.8, indicate that the career decided subjects had a clearer sense of identity (mean=13.5) than the undecided (mean=10.0) or indecisive (mean=8.0) subjects; have attended more to the importance of looking ahead and making tentative plans (mean=67.6) than undecided (mean=57.6) or indecisive (mean=60.2) subjects; and were more likely to possess information about the world of work and to be capable of making their own career decisions (mean=33.1) than the undecided (mean=30.2) or indecisive (mean=29.1) subjects.

Table 6.8 **The Mean and Standard Deviation (in parenthesis) for Each of the Decidedness Groups on the Measures of Career Development**

Decidedness Group	Career Development Variables		
	Self Awareness	Planning Orientation	Opportunity Awareness and Decision Skills
Decided	13.5 (3.1)	67.6 (9.3)	33.3 (3.6)
Undecided	10.0 (4.6)	57.6 (10.9)	30.2 (4.3)
Indecisive	8.0 (1.7)	60.2 (2.0)	29.1 (4.0)

The standardised coefficients for the second discriminant function (Table 6.7) show that an orientation toward the need for, and usefulness of career planning contributed the most to separating groups of career decided, career undecided, and career indecisive subjects (.9459), followed by the clarity of career goals (-.6941). Correspondingly, planning orientation had the highest loading (.7377) on the second discriminant function, while the structure coefficient (-.4831) for the self-awareness variable was relatively smaller. The relative contribution of decision skills and knowledge of the world of work to the separation of groups was negligible, as shown by the rather low standardised coefficient (-.0524) on this function.

The pattern of group means on the three career development predictors indicate the decided group were more likely to have engaged in a higher degree of career planning and to be less confused about their career identity than the other two groups (means have already been cited). Although the indecisive group are shown to be more confused about their career goals and self perceptions than the undecided group, they were more likely to have engaged in career planning activities as indicated by the higher mean for this group on the Career Planning Scale.

6.2.1 Summary of the Relationship between Career Development and Career Decidedness

The foregoing data reveal two dimensions whereby a significant amount of variance is shared between linear composites of career development and career decidedness variables. The mean (centroid) score for each group on the first dimension of discrimination, together with the magnitude of the structure coefficient for each career development variable, indicate that the group of career decided subjects are separated from the groups of undecided and indecisive subjects by their scores on the self-awareness, planning orientation, and opportunity awareness/decision-making skill measures, respectively. Further, the structure coefficients reveal that each career development variable makes a significant contribution to the separation of groups, which indicates that the main factor separating career decided subjects from the other two groups is their level of career development. As shown by each group's mean score on the career development variables, the career decided subjects indicate a higher level of self-awareness, a greater planning orientation, and more knowledge of the world of work and decision-making skills than subjects from the undecided and indecisive groups.

A further separation of decidedness groups was shown on the second discriminant function, with a notable distance achieved between the undecided and indecisive groups. The standardised coefficients for this function indicate that undecided and indecisive groups are distinguished by their scores on the career planning and self-awareness measures, respectively, with the measure of opportunity awareness/decision-making skill contributing little to the separation. Correlations between the career development variables and the pattern of group separation however, suggest that the career planning dimension of career development plays a greater role in separating the undecided group from the indecisive group. As seen by the group means on this variable, the indecisive group tended to report, on average, more attention to career planning than the undecided group.

Overall, subjects in the present sample who are more decided about their preferred career also tend to demonstrate higher levels of career development than those who are either uncertain of, or indecisive about, a career direction. Of these latter two groups however, those who have indicated no commitment to an occupational goal differ from those uncertain of an occupational goal on the basis of career planning. The indecisive group tend to report more attention to this aspect of their career development than the undecided group. Both the undecided and indecisive groups scored similarly on measures of career self-awareness and opportunity awareness/career decision-making skills.

6.3 The Relationship between Psychological Adjustment and Career Decidedness

In order to establish whether career decidedness and psychological adjustment were related to each other, a direct discriminant function analysis was performed, using decidedness group as the grouping variable and life satisfaction, self esteem, and internality of control as the discriminating variables.

The two possible dimensions of discrimination calculated for the present data produced a statistically significant separation among the decidedness groups, Chi-square=95.912, $p < .001$. After removal of the first function, this relationship dropped to insignificance. Further analyses of the relationship between decidedness group and the aspects of adjustment were, therefore, carried out for the first dimension of discrimination only.

The canonical correlation between groups and the discriminant function was very high (.7934) indicating a strong relationship between decision status and adjustment. The dimension of separation (representing scores on the adjustment variables) shared 62.9 per cent of the variability in decidedness, and accounted for 98.3 per cent of the variability between groups.

The mean discriminant score of each decidedness group was calculated for the present data in order to determine the nature of separation amongst groups by the discriminant function. The resulting centroids revealed the three groups were almost equally spaced on the discriminant variate, with the decided group (centroid=.7134) and the indecisive group (centroid= -2.4682) at the two extremes, and the undecided group (centroid= -.9431) occupying the intermediate position. Figure 6.2 shows the location of these centroids on the discriminant function. For illustrative purposes, the corresponding position of group centroids on the second function are used in the derivation of Figure 6.2.

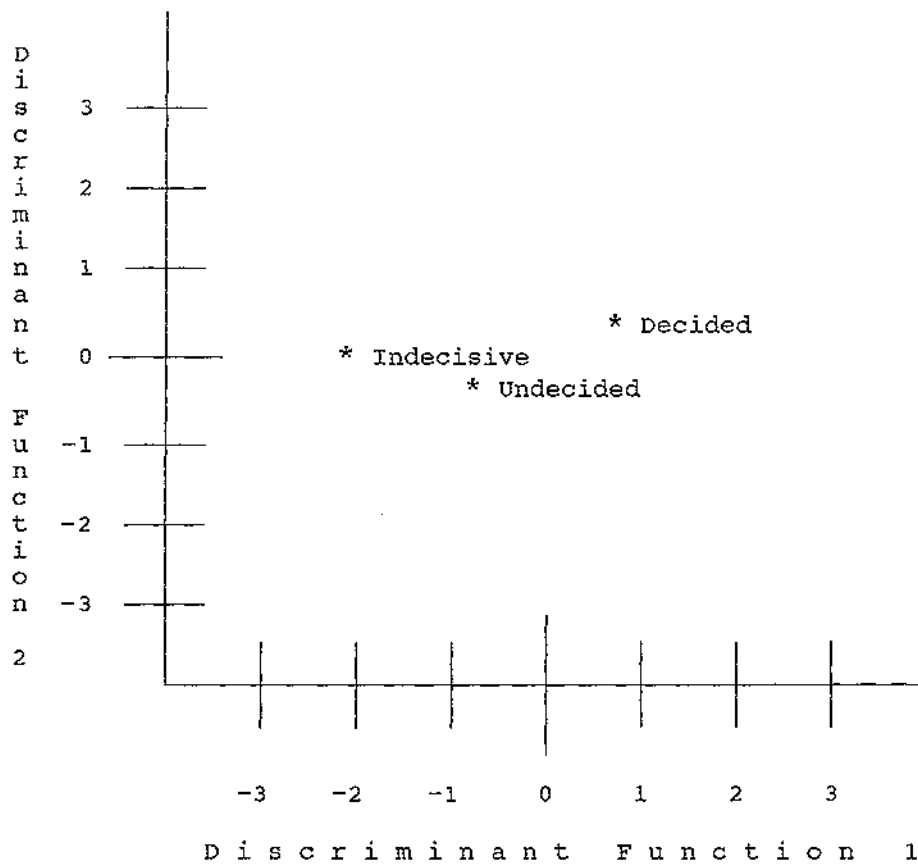


Figure 6.2 Plot of decided, undecided, and indecisive group centroids (means) on two discriminant functions derived from measures of psychological adjustment.

An examination of Figure 6.2 reveals that the centroids are quite distinct on the first function. The decidedness groups are well-separated by this dimension. In comparison, the second function hardly separates groups. The centroids on this function are almost on a straight line, which further demonstrates the first dimension of discrimination is sufficient to separate the groups from one another.

To determine the relative importance of the adjustment variables to the separation of decidedness groups, standardised coefficients were examined. These are listed in Table 6.9, along with correlations between each adjustment variable and the discriminant function in order to assess the degree of similarity between the variable and the function.

Table 6.9 **Standardised and Structural Canonical Discriminant Function Coefficients for Each of the Psychological Adjustment Variables**

Variable	Standardised Coefficient	Structural Coefficient
Life Satisfaction	.9403	.9818
Self-Esteem	.1887	.4504
Locus of Control	.1047	-.0786

It is demonstrated by Table 6.9 that life satisfaction made the greatest contribution to the separation of decided, undecided, and indecisive groups in the present study. Of the three variables included in the analysis, life satisfaction had the highest standardised coefficient (.9403). Self-esteem and internality of control had relatively low standardised coefficients (.1887 and .1047, respectively), suggesting these variables were of minor importance, compared to life satisfaction, to the separation of decidedness groups.

Similarly, life satisfaction had the highest loading (.9818) on the discriminant function, indicating the function is carrying nearly the same information as the variable. There is also, however, a reasonable degree of association between self-esteem and the function, as seen by the magnitude of the correlation between the two (.4504). The contrasting low standardised coefficient for self-esteem is likely due to the moderate relationship between this variable and life satisfaction ($r=.43$) (described in Chapter 5, section 5.4), since standardised coefficients are affected by the variability of the variables they are associated with, whereas structural coefficients are simple bivariate correlations so they are not affected by relationships with the other variables included in the function. The structure coefficient for the locus of control variable is near zero (-.0786) indicating this variable has very little in common with the function.

In order to shed light on the nature of group differences on these variables, the mean score for each group on each of the adjustment variables were compared. Table 6.10 contains the mean and standard deviation calculated for each decidedness group on the adjustment variables.

Table 6.10 **The Mean and Standard Deviation (in parenthesis) for Each of the Decidedness Groups on the Measures of Psychological Adjustment**

Decidedness Group	Psychological Adjustment Variables		
	Life Satisfaction	Self-esteem	Locus of Control
Decided	54.7 (6.2)	71.0 (15.1)	8.8 (3.5)
Undecided	49.3 (6.7)	63.3 (16.0)	9.8 (3.0)
Indecisive	34.6 (6.1)	49.5 (12.9)	9.5 (3.6)

It is revealed in Table 6.10 that decreasing levels of career decidedness was associated with lower levels of reported life satisfaction. The pattern of group means on this variable, which played the most important role in separating each group from one another (relative to the other two variables) show that subjects who indicated a chosen commitment to an occupational goal were more satisfied with their life-circumstances (mean=54.7) than subjects uncertain of an occupational goal (mean=49.3) or subjects uncommitted to an occupational goal (mean=34.6). Likewise, the decided student's were likely to have a more positive attitude toward themselves (mean=71.0), than undecided (mean=63.3) or indecisive (mean=49.5) subjects.

6.3.1 Summary of the Relationship between Career Decidedness and Psychological Adjustment

The foregoing results reveal one significant canonical correlation between dimensions of psychological adjustment and career decidedness groups. Group means on the adjustment composite demonstrated a clear separation of decided, undecided, and indecisive groups indicating that the level of career decidedness is related to psychological adjustment (as measured here). However, whereas a significant amount of variance is shared between psychological adjustment and career decidedness, the high magnitude of the standardised coefficient for the life satisfaction variable reveals that this variability appears largely attributable to the relationship of life satisfaction to level of career decidedness. Thus, the differences between groups of decided, undecided, and indecisive subjects are largely a function of differences in life satisfaction. The influence of life satisfaction on the separation of groups is further supported by the higher magnitude of the correlation between life satisfaction and decidedness, as reflected in the structural coefficient for this variable. However, further examination of the pattern of structural coefficients for the adjustment variables suggests that self-esteem also plays an important role in the separation of groups. It was pointed out that a moderate and significant correlation exists between these two adjustment variables, so it is likely that the importance of life satisfaction to the separation of groups is due, in part, to this variable's relationship with self-esteem. As shown by the group means on these two variables, those who are more decided about a preferred career tend to report more satisfaction with their lives and to have a higher level of self-esteem. As the present results have also shown, the level of career decidedness is not substantially associated with locus of control.

Overall, the present results indicate that subjects with greater clarity and certainty of their occupational goals also tend to exhibit higher levels of psychological adjustment, as defined by life satisfaction and self-esteem, however, the level of career decidedness does not appear to be related to subjects' sense of control over their lives (locus of control).

CHAPTER SEVEN

DISCUSSION

7.1 Summary of the Research

The aim of this research has been to examine the career development of school leavers, including the antecedents of adaptive career behaviour and the adjustive function of career-choice competence in the post-school environment. It was considered necessary before embarking on the central theme of the study to inquire into the occupational, educational, and psychological context of the school leavers' career development since it was from this background that the present study was conceived and planned.

In examining the current climate of employment, it was observed that this, and the related issue of structural changes in the world of work, have called attention to the need for school leavers to possess an adequate repertoire of generic coping skills to make the pre-vocational and vocational decisions required for successful entry into, adjustment in, and progress through the working world.

This was followed by an examination of recent changes to upper-secondary education provision brought about by the realities of structural shifts in the framework of employment. After outlining current educational provision, the conclusion reached was that the educational system is now far more flexible, offering a greater variety of subjects to a wider range of students. However, it is still debatable whether it provides a relevant pre-work experience for the majority. As far as career/transition education is concerned, it was seen that, although great strides have been made in this area of the curriculum, it still remains unclear as to the relative impact such efforts are having on the school leaver. In particular was the concern raised with regard to the lack of empirical research preceding, during, or following implementation of the comprehensive reform. That there still exists very little credible evidence to support the rationale for the types of programmes developed and implemented reflects a situation long overdue for improvement.

This issue was further explored from the perspective of the school leavers' psychological and social development. It was shown that work provides a critical stimulus for healthy adult development. It was also pointed out that the traditional path to work has been seriously disrupted for many young people in the wake of structural shifts in the nature and availability of employment. It was concluded that movement into an adult working role involves far greater tensions and dilemmas than in the past, with the very real possibility of far-reaching implications for psychological health and social stability.

Therefore, not only must schools be seen to be doing something about facilitating their students' readiness for movement into the post-school environment, schools also need to demonstrate empirically, and through objective means, that these efforts are working.

In order to examine the career development of school leavers, the present study drew largely from the theoretical formulations of Donald Super (1957, 1963, 1983). This framework was presented in Chapter One (Section 1.2), and linked to empirical research in Chapter Three with the purpose of identifying the dimensions of career development relevant to the present study. Chapter Three also drew attention to the similarity, between Super's model and the performance objectives of career/transition education in New Zealand secondary schools, thus providing support for the utility of the conclusions drawn in Chapter Three, for an examination of career/transition education and for an examination of the career development process of New Zealand school leavers.

Chapter Four, the research methodology, included detailed information of the measures employed to examine the issues of career development of interest to the present study. In Chapter Five, the preliminary analysis provided supplementary information of the psychometric properties of established instruments used in the present study. This paved the way for Chapter Six, in which the research questions and hypotheses were examined. In Chapter Six, the outcome of the research questions and hypotheses were described in detail under three main themes, (1) career/transition education issues and reasons for undertaking higher education; (2) the relationship between career maturity (level of career development) and career decidedness; and (3) the relationship of career decidedness to psychological development.

The findings relating to the research questions and each hypothesis are summarised in the following section.

7.2 Summary of the Research Results

The outcome of the research questions and tests of hypotheses were presented in detail in Chapter Six. This Section provides a summary of the findings relating to the research questions and each hypothesis before discussing these in light of the context in which the study was carried out. The limitations of the present research, along with suggestions for future research, are provided in the final section of this chapter.

7.2.1 Results Relating to the Research Questions

Career/Transition Education Experience and Subjects Preferences

Overall Sample

It was revealed that (1) written information, (2) work place visits, and (3) advice from parents were overall the most widely experienced methods of career/transition education for the present sample. Other common methods included career evenings, and personal career guidance from a school counsellor or career advisor, which were placed (4) and (5), respectively. However, despite their widespread provision, the methods differed considerably according to the overall perceived usefulness to subjects in helping them decide what to do on leaving school. Of those who experienced each method, advice from parents was seen to be the most useful, followed by work place visits, and personal guidance from a school counsellor or career advisor. Information from written sources and career evenings were seen by subjects as being the least useful of the most commonly experienced methods of career/transition education.

Also noted was the overall limited degree of work experience and/or work exploration engaged in by the present sample, even though many subjects experiencing this form of career/transition education had found it to be the most useful. This method was the least common of all those experienced by the present sample. However, in the overall usefulness ratings, work experience/work exploration was seen to be the second most helpful method for helping subjects decide what to do on leaving school.

Of the 152 subjects in the sample who had indicated that they received some form of career/transition education, 24 (15.7 per cent) either did not report which method they had found useful, or indicated that they had not found any methods to be useful in helping them to decide what to do on leaving school.

Career Decided Subjects

The subjects in the present sample who indicated a chosen commitment to an occupational goal experienced, on average, four methods of career/transition education each. The most frequently experienced methods for these subjects included information from written sources, advice from parents/guardians, and visits to work places. Of these, advice from parents/guardians was seen to be the most useful source in helping to decide what to do on leaving school, whereas written sources were seen to be the least helpful. Career evenings and school guidance counsellor/career advisor were used less frequently and correspondingly were not seen to be helpful by subjects who experienced them. Just over a quarter of the subjects in this group had the opportunity to undertake work experience and/or work

exploration while at high school and well over half of these individuals found this to be the most useful source of help in deciding what to do on leaving school.

Of the subjects in the decided group who reported having received career/transition education during their secondary school years, 13.4 per cent (9 out of 67 subjects) either did not indicate which method was most helpful, or indicated that they had not found any of the career/transition education methods useful in helping them to decide what to do on leaving school.

Career Undecided Subjects

The subjects in the present sample who had considered a number of alternative jobs but lacked a clear preference reported having received an average of five methods of career/transition education. Visits to various work establishments was the most frequently reported method, followed by information from written sources and career evenings. Of these, visits to work places was seen to be the most helpful, although this was only the case for less than one quarter of those who received this method. Career evenings and written information were seen as the least useful source in helping to decide what to do on leaving school, despite the high rate of provision.

More subjects within the undecided group reported having received guidance from a school counsellor/career advisor than was reported for the decided and indecisive groups. This source of career/transition education was the fifth most common method received by the undecided group, following advice from their parents. Similar to the decided group, subjects within the undecided group reported having found advice from their parents to be more useful in helping them to decide what to do on leaving school than that received from a school counsellor or career advisor.

Of the 59 subjects in this group who experienced some form of career/transition education, 12 (20.3 per cent) either reported having found none to be useful in helping them to decide what to do on leaving school, or did not respond.

Career Indecisive Subjects

The subjects in the present sample who indicated that they had given no thought to the types of jobs they would like to do, experienced an average of three methods of career education during their secondary school years. The most frequently received method was from written sources, followed by advice from their parents/guardians and visits to work places. Of these, the most helpful source was seen to be visits to work places. Parents/guardians rated second, and only one student had found written information to be useful in helping them to decide what to do on leaving school. Half of the subjects in this group had

sought guidance or advice from a school counsellor or career advisor, and similarly, almost half of these subjects had found this source to be the most useful.

Three (17.5 per cent) of the subjects in this group either did not indicate which method was the most helpful, or indicated that they had not found any of the career/transition education methods useful in helping them to decide what to do on leaving school.

Views on Career/Transition Education

The overwhelming majority of subjects in the present sample felt that improvements needed to be made in the nature of career/transition education. On a general level, most felt that the career advice they had received at school was too impersonal, often being general and not relevant to their personal needs or interests. A common criticism was that the school counsellor or career advisor was too inexperienced with regard to the provision of career information and career guidance. A related issue was the request for more quality time with career counsellors/advisors. Many noted that the career counsellor/advisor at the school also had teaching responsibilities which meant that career counselling/advice was only available on a limited basis.

Most of the subjects suggested that career/transition education could benefit from more current, up-to-date information. Another quite common remark was that students should be informed of the qualifications required for particular jobs, both when choosing options and when preparing for the world of work. More information about the availability of jobs was another frequent response, and a number of subjects indicated that they would welcome (more) work experience.

Reasons For Undertaking Higher Education

The most frequent reason given by subjects for continuing their education was the belief that this will lead to a more satisfying job. This was followed for subjects within the decided group by the requirements of a preferred job. It was revealed that wider disparities existed among subjects in the undecided group. In addition to the prospect of job satisfaction, a number of subjects within this group indicated that their parents had played the most influential role in their decision to attend university, while just under a quarter either reported that they did not know why they had undertaken further education or felt that there was nothing else to do but to attend university. In the case of subjects from the indecisive group, anticipation of job satisfaction was followed by the desire to continue their education and parental expectations as important reasons for continuing their education.

7.2.3 Results Relating to the Research Hypotheses

Career Maturity and Career Decidedness

The results were supportive of this hypothesis. Subjects in the present sample who indicated a chosen commitment to an occupational goal also tended to be more aware of the need for, and usefulness of career planning; have a clearer understanding of their work-related strengths, interests, and needs; and possess more information about the world of work and of how to make career decisions than those who were less clear about a preferred career. Differences between undecided and indecisive subjects was not related to career-self awareness, occupational knowledge and decision-making skills. Subjects within these groups tended to demonstrate similar levels of career maturity, as defined by these dimensions. Undecided and indecisive subjects however, were differentiated by their planning orientation. Those who had not considered any jobs nevertheless demonstrated a higher degree of awareness of the need for, and usefulness of, career planning than those who had considered alternatives but lacked a preference.

Career Decidedness and Psychological Adjustment

This hypothesis was partially supported. Those who reported more satisfaction with their life also tended to be more decided about their preferred career choice. Only limited support was obtained for the relationship of self-esteem to career decidedness, however, those with higher self-esteem also tended to be more decided about their preferred career. There was no clear support for the relationship of locus of control to career decidedness. The extent to which subjects felt in control of their lives did not seem to have any bearing on the degree to which they had decided on a preferred career.

7.3 General Discussion

The findings presented in this study, coupled with the results from longitudinal studies (for example, Jordaan et. al., 1974) indicate that school leavers who choose a post-school path with the intention of attaining a particular career goal are likely to function in a more positive and adaptive manner than those who leave school and choose to undertake a given pathway that has no such clarity of direction. As revealed by the results of the relationship between career decidedness and aspects of psychological adjustment, school leavers who are relatively clear and certain with regard to their choice of career also tend to report greater satisfaction with their life and to exhibit higher self-esteem. Furthermore, data relating career decidedness to school leavers' reasons for undertaking a particular path revealed that the decision to go on to further education was more likely to be part of a coherent plan for the future for

those who had decided on a preferred career than was the case for school leavers who were undecided or had not thought about the types of jobs they would like to do. In a number of cases, subjects within the decided group saw the purpose of their decision to undertake higher education as being linked to employment prospects. In contrast, subjects from both the undecided and indecisive group tended to report anticipation of job satisfaction as the most influential in their decision to gain higher qualifications, with a second frequent response for the undecided group being to fulfil their parents expectations, and for the indecisive group, to fulfil the desire to learn.

The results presented here are consistent with the findings of existing research examining the relationship of career decidedness to psychological well-being and personality variables (Arnold, 1989; Holland, et. al., 1980; Khan et. al., 1983; Robbins et. al., 1985; Jordaan et. al., 1974).

Several perspectives can be employed to explain why the school leaver's clarity of a preferred career direction should have positive psychological outcomes in the post-school environment. First, during the transition from school to work, and whether changing role (student to worker), or changing orientation to a role already held (high school student to tertiary student or to apprentice), the young person is faced with a variety of differences in behavioural requirements, social interactions, and social roles. As suggested by Louis (1980), the pursuit of a well-informed goal at a time of transition may provide a filter through which sometimes surprising events in an unfamiliar environment with novel role requirements are interpreted. Given that career decidedness implies a goal, and considered ways of obtaining that goal (Robbins et. al., 1985; Super, 1980, 1983), then it seems likely that movement into and through higher education, with the intention of attaining a career goal, presents fewer 'surprise reactions' which, in turn, facilitates adjustment. As the results of this study have shown, this certainly appears to be the case as far as life satisfaction, and self-esteem are concerned.

Second, as pointed out in Section 2.3 (Chapter Two), the process of transition from school to work is an integral part of the overall process of development toward adulthood. As also pointed out, this process has become a more lengthy, drawn-out and uncertain process than in past generations. Faced with a complex world of work, with highly specialised tasks, most school leavers must spend an extended period of time being trained in technical institutes and places of higher education to acquire specialised skills, educational experiences and professional training. Still others, who leave school early and enter the workforce with minimal or no qualifications, are likely to experience long and/or multiple spells of unemployment as they continue to compete for the diminishing supply of jobs which once would have been available to them.

The sense of goal directedness that career decidedness implies may provide the school leaver with a sense of meaning for what they are doing, and thus, counter any possible adverse psychological and social

consequences associated with the prolongation of the period between adolescence and adulthood. In particular, the high degree of congruence between opportunity awareness and self awareness that is associated with career decidedness suggests a sense of meaning toward a goal that is both realistically accessible, and satisfying. Thus, being 'career decided' at a time when the young person faces a long period before acquiring many of the roles and responsibilities of adulthood could also be beneficial to psychological growth and development in the post-school environment, by providing the school leaver with a goal to work toward. In light of the nature of the relationship between career decidedness and aspects of psychological adjustment presented here, such an explanation appears well supported.

In terms of facilitating adjustment in the post-school environment therefore, it seems desirable for school leavers to be decided about a career.

One implication of this finding is that the secondary education system cannot rely exclusively on information about school leavers' destination as a measure of how well efforts to facilitate the movement from school to work are operating. Information about 'which' and 'how many' school leavers undertake one particular education or training course for instance, does not necessarily tell us 'which' and 'how many' are engaging in activities to promote desired career growth and development. As the results from the present study indicate, such inferences from demographic data would likely be valid only for school leavers undertaking a given path with a clear career goal in mind. Therefore, in order to enhance the accuracy of current approaches to evaluating the outcome of secondary education provision (for example, see New Zealand Government, Transition Education Division, 1989) for school leavers' current and future development, it is necessary to consider not only 'where' they go on leaving school but also, 'why' they choose to undertake such a path.

In addition to the adjustive function of career decidedness in the post-school environment, this study also examined school leavers' repertoire of coping skills to make the prevocational and vocational decisions required of them on leaving school. Results relating career decidedness to selected dimensions of career maturity indicated that those who had decided on a preferred career were differentiated, from subjects who lacked a clear preference and those who had given no thought to possible jobs, by their level of career development. Career decided subjects were found to be more aware of the need for, and use of, career planning; to possess more information about the world of work and know how to apply decision-making principles; and to be more aware of their work-related strengths, interests, and needs. These results are consistent with the findings of (i) Holland et. al. (1977), on the relationship between opportunity awareness and career decidedness; (ii) Grotevant et. al. (1985), Healy et. al. (1985), Holland et. al. (1977), and Holland (1985) on the relationship of self-concept and identity variables to decidedness; and (iii) Reiner et. al. (1984), and Blustein (1988) on the relationship of a future orientation and planning focus to the career choice crystallisation process.

The findings discussed above also point to the importance of school leavers' career maturity for adjustment in the post-school environment. As the present results indicate, the school leaver's level of career development is related to the clarity and certainty of a future career goal. As already discussed, career decidedness, in turn, is associated with life satisfaction and self-esteem. Based on these findings it could be suggested that, part of the school leaver's capacity to feel satisfied with their life and to enjoy high self-esteem may be to do with the lack of a future orientation and planning focus, of awareness about the opportunities available to them, of decision-making skills to discriminate alternatives, and to the lack of personal knowledge about strengths, interests, and needs. Furthermore, given the relationship of life satisfaction and self-esteem to healthy development (for example, Coopersmith, 1981; Robbins et. al., 1985; Rotter, 1982), the school leaver's level of career development may also have important implications for the healthy development of our future workforce.

Contrary to the criteria upon which the funds for planning and developing career/transition education are based (see Chapter Two, Section 2.2.3), the results presented here indicate that it is a myth to assume that academic students invariably are able to cope with important career decisions with little intervention from professional sources. Insofar as the decision to undertake higher education can be seen as a means toward an end, rather than an end in itself, then high school students likely to follow such a path also need help with their career development. The differences in career maturity found in the present sample support this statement. While one might argue against the necessity for intervention with academic students who are generally staying out of trouble and conforming to expectations, sudden environmental shifts may leave the career undecided and career indecisive among them, very vulnerable in dealing with the uncertainties of the occupational structure. Furthermore, considerable potential for the actualization of social contributions may be lost. Ultimately, decisions which were avoided by the undecided and indecisive school leaver taking up a course of study at a tertiary institution may press for attention further down the road in life. An environment in the school which encourages open exploration of occupational alternatives could do much to foster the career development of students wishing to undertake an academic route toward the world of work.

If replicated by other researchers, the findings presented here may prove to be very useful to career guidance counselling professionals. Awareness of the school student's level of career development may allow more effective forms of interventions to be made as one approaches the first significant career decision. Valid and reliable measures, such as the Career Development Inventory (adapted to the New Zealand situation), could serve to identify objectively, those individuals having difficulty in the career development process and to serve as a base for providing direction to areas for career intervention. High school students could be assessed on their levels of self-awareness, opportunity awareness, decision-making skills, and planning orientation and then guided toward the appropriate counselling and exploration activities likely to strengthen their deficiencies in each area. An educational context flexible in providing

a range of opportunities from which to choose is a critical feature enabling advancement to more mature career development (Harren, 1979; Jordaan, 1963; Stumpf, et. al., 1983; Super, 1981, 1983).

Collectively, the results of this study support the observation made in Chapter One, namely, that individuals do not move through phases of career development at equal rates. As a consequence, learning activities need to differ in terms of breadth, depth, nature, and pace. While some individuals may require remediation in terms of acquiring fundamental skills, others need opportunities for enrichment. To the extent that such differentiation of learning experiences is based on appropriate diagnosis rather than extraneous data (for example, socioeconomic status, ethnic orientation, sex), then curricula activities will provide for valid individuation.

The data relating to career/transition education may provide a salutary lesson to staff concerned with career/transition education programmes, since it has been demonstrated that the methods of career guidance organised by them are often not seen to be very helpful to those on the receiving end. The present results revealed that under half of the subjects who had received career/transition education had found it to be useful, and that the most prevalent types of guidance received were not overwhelmingly popular (namely, written information, visits to work places, and career evenings). The results of the present study must, for instance, bring into question the nature and content of written information distributed to subjects and the reasons why this avenue of communication appears to be failing so many subjects. Perhaps this points to the need to revise the content and presentation of such sources, and/or to the need to help students relate this information to their personal interests, strengths and needs.

Subjects in the sample who were relatively clear regarding a future career goal appear to have consulted mainly written sources, received advice from their parents or guardians, and had felt that the advice from their parents/guardians had been the most useful in helping them to decide what to do on leaving school. It would appear that for subjects within this group, parents/guardians played an important role in their career-decision making. Subjects from this group tended to feel that, in addition to the anticipation of job satisfaction, qualifications required for a preferred job had been the most influential in their decisions to attend university. Thus, it would appear that, for the majority of subjects in this group, the decision to go on to further education was part of a coherent programme of planning for the future, and that influences from their home environment, namely, advice from their parents/guardians, played a much greater role in helping them to formulate their career plans than that offered by their schools.

However, although parents/guardians may provide some young people with adequate advice and support when considering their career plans, it is not the case for all young people. Although the proportion of subjects in the undecided and indecisive group who reported having consulted their parents/guardians for career advice was similar to that of subjects from the decided group, only a small number from these

former two groups felt that this had been the most helpful. Clearly, the findings presented here suggest that many young people require more help than can be provided by parents alone. This seems to be consistent with research from other countries that has shown individuals do not move through career development toward career maturity at equal rates (Blustein, 1988; Holland et. al., 1980; Jordaan et. al., 1979; Lokan et. al., 1982). To reinforce a point already made, learning experiences need to differ in terms of breadth, depth, and nature. This would appear to call attention to the importance of career/transition education methods to provide this need. As shown in Chapter Three, structured interventions in secondary schools play a major role in enhancing the career maturity of students (for example, Trebilco, 1981).

Perhaps the most disappointing find stemming from the results on career/transition education might be seen to be that relating to interviews with the career/transition department at school, which was not indicated as the most helpful form of guidance by any group who experienced it. This avenue of assistance should surely be considered as potentially one of the most effective methods of career/transition education, and yet it appears to be failing miserably, in addition to the fact that it is not widely available (at least, for the present sample). The previously mentioned open response comments are enlightening in this respect, namely, that a number of subjects found these to be too impersonal and generally lacking in detailed career advice. Thus, this area of career/transition education shows symptoms of an unprofessional approach. It would appear that staff responsible for career counselling and advice are often inadequately trained for the task.

Career/transition education in schools could be seen to require a far more prominent and less passive role than it does at present. Its terms of reference should be clearly set out centrally and, due to the specialist nature of its tasks, trained staff, preferably with a total commitment to this duty, but certainly with adequate timetabled time available, would need to be employed.

7.4. Limitations of the Present Study, and Suggestions for Future Research

Although this study yielded significant results that were consistent with some fundamental propositions about the readiness of school leavers to cope with career-related tasks, a number of limitations need to be noted. First, the relationships that have been identified are correlational, not causal. Hence, although the research design used here was powerful in being able to differentiate between components of career maturity and career decidedness, and between career decidedness and psychological adjustment, causality is only suggested and not proven. More information is needed on the issues and phenomena experienced as salient by respondents in order to fully test explanatory models (Rosenthal et. al., 1984). For example, it is necessary to find out how school leavers use different types of career information, and to ascertain

what types of information they feel they need. Questions such as this are likely to require qualitative data-gathering techniques as well as an optimal research design.

A second limitation is that the measures used in this study were largely contingent on self-report. However, given that existing research in this area in New Zealand has generally relied on interview-derived measures or observation, the use of traditional psychometric measures in this study, which yield valid and reliable data, may be viewed as representing the next practical step in this line of research.

Third, it is important to note the limited generalisability of the results reported in this study. Data were gathered at only one university and restricted mainly to science and social science students. Inevitably, there will be variations between other faculties and between other higher education institutions. Thus, replication studies are needed, particularly with samples that are drawn from other populations (such as school leavers undertaking non-academic routes toward employment). If it proves replicable, this study has some important implications for practitioners, researchers, and policy-makers in the field of career/transition education provision.

This study has demonstrated that the school leaver's readiness to undertake effective steps toward the world of work plays an important role in facilitating psychological adjustment in the post-school environment. For the present sample, many had left school and chosen to continue on to higher education unaware of the nature of the occupational field for which their course may circumscribe, and with little knowledge of their ability to adapt to the types of jobs for which they may eventually be qualified. Those who were undecided about their career direction or had given no thought to a career goal also lacked the attitudes, knowledge, and behaviours that both the developmental literature (for example, Super, 1983) and the objectives underlying career/transition education (Department of Education, Transition Division, 1989) consider as necessary to undertake effective steps toward the world of work. Further, as the results relating career decision status to life satisfaction and self-esteem indicated, school leavers who chose a post-school path with no clear career goal in mind are less likely to function in a positive and adaptive manner than those who leave school and undertake a particular path with the intention of attaining a career goal.

It is hoped that the findings of this investigation, when considered in light of recent changes to the organisation and objectives of upper-secondary education provision, will provide an incentive for practitioners, researchers, and policy-makers to begin and to continue to evaluate the need, implementation, and impact of programmes intended to promote the career growth and development of New Zealand's youth.

It is of course too easy to view as immutable national and local policies and procedures which might account for results of studies like this. This is understandable but unfortunate, because data of the sort gathered here allow informed and critical examination of those policies and procedures, some of which it may be possible to change, if appropriate. What knowledge, understandings, insights, skills, values, and attitudes should students acquire? To what extent are these cognitive, affective, and psychomotor developments similar and dissimilar for individual students? What are the areas of common experience for all students and what are the areas in which differentiation is needed? How can the educative potential of the classroom, the community, private and public institutions and agencies be realised most effectively? What experiences are best provided under the auspices of the school and which can other agencies, public and private, provide more effectively? Policy-oriented issues such as these depend on the availability of sound, objective local and national data. As well as contributing to our knowledge of school leavers' career development and the adjustive function of career-choice competence in the post-school environment, this study illustrates one realistic and objective way in which practitioners and researchers can include the school leaver as a unit of analysis in the evaluation of career/transition education provision.

APPENDIX I (A)

Transcript of the Introductory Meeting

Good morning/afternoon. My name is Diana Bloor, and I am a graduate student in the Psychology Department. This year I'm doing some research as part of my degree, and the reason why I'm here today is to recruit participants for this research.

I'm particularly looking for first year students who have recently left school - like within the last year or two.

The study is about the career development of recent school leavers. I'm basically interested in finding out just where you stand in relation to what you want to do once you complete your education.

This will look at such issues as how clear you are as to where you're heading, how you feel about what you're doing with your life at present, your thoughts about the future, and also, the sorts of difficulties you might be facing in deciding what it is you'd like to do once you complete your studies.

I'm also interested in finding out about the types of career guidance or career advice you might have received in the past; and also, how you feel about this advice. For instance, if you received career guidance at school - was it useful in helping you to decide what types of jobs you'd like to do? Or, did it provide you with sufficient information about the types of jobs that might be available to you?

To look at these issues, I've constructed a two-part questionnaire, so, for those of you who are recent school leavers, and are keen to participate, your involvement will basically involve answering two questionnaires.

The first questionnaire will be mailed to you. I'll be posting these later this week so that you should receive it on either Monday or Tuesday of next week.

The second questionnaire is going to be administered up here, at the University, the week after you receive your first questionnaire. This will be the week before capping, and there are a range of times available for you to come in and do this second questionnaire during that week.

The students who participated in the pilot testing of these questionnaires took about 30 minutes to complete the first one, and between 20-30 minutes to do the second one; So that should give you an idea of how long it will take you to do these questionnaires.

Those of you who are recent school leavers, and would like to participate in this research, I have a 'Student Participation Form' here that you will need to fill out. This form asks you for your name and address so that I can mail the first questionnaire to you. It also asks you to record a date and a time that is convenient for you to come in and do the second questionnaire.

I have a sheet here that gives you a range of times that are available for you to select from. These times are for the week beginning Monday, April 23 to Saturday, April 28 - this is the second to last week of the term - the week before capping, and it is also the week after you would have received the first part of the questionnaire in the mail. So, in effect, if you would like to participate in the research, you will receive part one of the questionnaire next week, and then, in the following week, you'll come to the university and do part two of the questionnaire.

I'll hand these forms out now, so have a look at them and if you would like to participate in the research, fill out the student participation form, and the time sheet [hand these out]. Those of you who are recent school leavers, and do not wish to participate, could you please indicate this by ticking the box labelled 'No' on the 'Student Participation Form'. You can either fill this out now, or, if you would like to think about it, you can fill it out later. After you have completed the Student Participation Form, and the time sheet - pop them into this box here [indicate box]. The box is labeled 'Career Development Study', and you'll find it here [place on the stool], on this stool, by the door. O.K.?

One final piece of information - I want you all to understand that you're under no obligation to participate in this research if you do not wish to, and if you would like to participate, you can be assured that what you do will be treated as confidential. This means that the information I obtain from you will only be seen by me. The coding system that I am using means that your name will not be on anything you do, so that only you will know what you've written. To ensure this confidentiality, and also, to acknowledge that your participation in this research is voluntary, I'd like you to sign at the bottom of your participation form, where it asks you for your signature, for this purpose.

Does anyone have any questions ?

APPENDIX I (B)

Participant Information Form

CAREER DEVELOPMENT STUDY

Participation Form

I would like to participate in the Career Development Study:

☐ Yes☐ No

If you would like to become a voluntary participant, please complete the following details:

(A) Career Development Questionnaire: Part 1

(This will be mailed to you)

Name: _____

Address: _____

Telephone: _____

(B) Career Development Questionnaire: Part 2

(Please record the dates/times that you have selected from the administration time sheet).

First choice

Second Choice

Date: _____

Date: _____

Time: _____

Time: _____

I understand that my participation is voluntary and that all data collected from me will be treated as confidential.

APPENDIX I (C)

Administration Time Sheet**CAREER DEVELOPMENT QUESTIONNAIRE: PART II**Administration Times

Time	Monday April 23	Tuesday April 24	Wednesday April 25	Thursday April 26	Friday April 27	Saturday April 28
9-10am						
10-11am						
12-1pm						
1-2pm						
4-5pm						

- (1) Please select two possible dates/times for which to complete part two of the Questionnaire. (Every effort will be made to give you your first choice for this second administration).
- (2) Record these on your participation form.

Thank you.

Note: You will receive confirmation of the date and time you have chosen when you receive the first part of the Questionnaire in the mail.

APPENDIX II (A)

Cover Letter

April 17, 1990

To _____

Re - Career Development Study

Thank you for your offer to participate in my research.

As you will see, I have enclosed the first questionnaire for you to fill out. This questionnaire is in six sections that cover a range of experiences related to career development.

Please work through each section in turn, and answer all questions honestly. There are no right or wrong answers. Your replies will be treated as confidential, so give your honest opinion on each of the questions.

Do not discuss your answers with other people. It is your own opinion, and your own experience that matters.

Please, remember to bring this first questionnaire with you when you come to do the second one.

If you have any problems in filling out this first questionnaire, do not hesitate to contact me. My office is in room P3.20, phone number 4072 (Massey) or 76706 (home). Alternately, you can leave a message for me at the Psychology Department's Office. This is located on the second floor of the Psychology building.

Yours sincerely

.....

Diana Bloor

APPENDIX II (B)

Confirmation note for date/time/place
for completing Part II of the CDQ

**C A R E E R
D E V E L O P M E N T
S T U D Y**

To

The confirmed time for you to come in and do the second questionnaire for the above study is as follows:

Day

Date

Time

Note: This will take place in Rm 1.13 of the Psychology building.

Please, remember to bring the first questionnaire with you.

You will receive your note for exemption from one of the 75.102 labs once both questionnaires have been completed and collected.

APPENDIX II (C)

Career Development Questionnaire, Part I

C A R E E R
D E V E L O P M E N T
Q U E S T I O N N A I R E

PART I

ALL REPLIES TO THIS QUESTIONNAIRE
WILL BE DEALT WITH IN STRICT CONFIDENCE

This questionnaire is in six **SECTIONS**. Please work through each section in turn. It is important that you answer all the questions.

- SECTION A** asks for some information about yourself.
- SECTION B** asks you about the nature of the career guidance
you received at school.
- SECTION C** concerns what you are doing this year.
- SECTION D** asks about your career plans.
- SECTION E** asks you about the problems you experience in
planning for a career.
- SECTION F** asks you about your attitudes toward different
aspects of your life.

SECTION A

General Information

1. Age □□ Years □□ Month(s)

2. Sex □ Male □ Female

3. How do you describe yourself:

□ NZ European

□ NZ Maori

□ Other, please specify

□

4. Hometown

□□

5. Father's occupation: (Please give title and,
if possible, describe the type of work)

□□□

17-19

6. Mothers Occupation: (Please state if housewife)

7. What type of Secondary School did you attend?

20. ☐ State co-ed
☐ State single-sex
☐ Integrated co-ed
☐ Integrated single-sex
☐ Private co-ed
☐ Private single-sex
☐ Other, please specify

☐
27

8. At what form did you leave school?

- ☐ Fifth
☐ Sixth
☐ Seventh

9. What is your highest school qualification?

- ☐ School Certificate
☐ Sixth Form Certificate
☐ Seventh Form Certificate
☐ Bursary
☐ Other, please specify:

☐
36

SECTION B

Careers Guidance Information

1. Did you receive careers guidance help at school?

☐ Yes

☐ No

37-38

(IF YOU HAVE ANSWERED NO TO QUESTION 1 ABOVE, PLEASE GO ON TO SECTION C)

2. Have you received any of the careers guidance listed below? (Please tick one or more boxes below)

(a) Placement in a Work Exploration or Work Experience programme. ☐

(b) Visits to workplaces or to tertiary institutions. ☐

(c) Careers Evenings (or similar functions). ☐

(d) Books, handbooks, or pamphlets. ☐

(e) Personal session(s) with school career guidance counsellor, or career advisor. ☐

(f) Advice from Parents/guardians. ☐

(g) Other, please specify: ☐

□□□□

3. If you have ticked any of the boxes in Question 2, which one was the most helpful to you in deciding what to do on leaving school?

4. Do you feel that the careers guidance you received could have been improved in any way at all?

☐ Yes

☐ No

50-51

If yes, please state below in what way you feel it could have been improved:

□□□□

SECTION C

Present situation

1. What course are you currently enrolled in?

□□

2. Is this your first year of tertiary study?

☐ Yes

☐ No

If no, how many years have you been studying at a tertiary institution? (Including this year).

□□ Years

60-61

3. What were you doing this time last year?

(a) I was at Secondary School. ☐

(b) I was working full time. ☐

(c) I was unemployed. ☐

(d) Other, please state: ☐

☐

4. Would you please say why you have decided to undertake further education, by ticking one or more boxes below:

(a) Because my parents wanted me to go on to further education. ☐

(b) Because I feel that higher qualifications lead to a more satisfying job. ☐

(c) Because I feel that higher qualifications lead to a better paid job. ☐

(d) Because I feel I'm more likely to get a job. ☐

(e) I don't know. ☐

(f) Any other reasons, please state: ☐

☐

73-74

If you have ticked more than one box for Question 4 above, which **one** is the **main reason** why you have decided to undertake further education?

SECTION D**Career Plans**

How much have you thought and planned about doing each of the following things? For each of items 1-8, choose the **ONE** answer that best shows what you have done.

1. Finding out about educational and job possibilities by going to the library, sending away for information, or talking to someone who knows:
 - (a) I have not thought about this at all. □
 - (b) I have thought about this a bit, but haven't made any plans yet. □
 - (c) I have made some plans, but am still not quite sure of them. □
 - (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. □

79

1
2. Talking about career plans with an adult who knows something about me:
 - (a) I have not thought about this at all. □
 - (b) I have thought about this a bit, but haven't made any plans yet. □
 - (c) I have made some plans, but am still not quite sure of them. □
 - (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. □

3. Taking subjects that will help me decide what line of work to go into when I finish my education:

- (a) I have not thought about this at all. ☐
- (b) I have thought about this a bit, but haven't made any plans yet. ☐
- (c) I have made some plans, but am still not quite sure of them. ☐
- (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. ☐

8

9

4. Taking subjects which will help me in college or university, in job training, or on the job:

- (a) I have not thought about this at all. ☐
- (b) I have thought about this a bit, but haven't made any plans yet. ☐
- (c) I have made some plans, but am still not quite sure of them. ☐
- (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. ☐

5. Sorting out problems that might make it hard for me to get the kind of training or work I would like:

- (a) I have not thought about this at all. ☐
- (b) I have thought about this a bit, but haven't made any plans yet. ☐
- (c) I have made some plans, but am still not quite sure of them. ☐
- (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. ☐

6. Taking part in activities (e.g. photography club, computer club) that will help me decide what kind of work to go into:

- (a) I have not thought about this at all. ☐
- (b) I have thought about this a bit, but haven't made any plans yet. ☐
- (c) I have made some plans, but am still not quite sure of them. ☐
- (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. ☐

7. Getting a part-time or holiday job which will help me decide what kind of work I might go into:

- (a) I have not thought about this at all. ☐
- (b) I have thought about this a bit, but haven't made any plans yet. ☐
- (c) I have made some plans, but am still not quite sure of them. ☐
- (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. ☐

2

25

8. Getting money to support myself while I'm studying or training for a job:

- (a) I have not thought about this at all. ☐
- (b) I have thought about this a bit, but haven't made any plans yet. ☐
- (c) I have made some plans, but am still not quite sure of them. ☐
- (d) I have made definite plans, and have started to carry them out or know what to do to carry them out. ☐

How much time and thought have you given to the following choices? (For each of items 9-11, choose the **one** answer that **best** shows how you rate yourself).

9. Choosing subjects at school (including options or electives)

- (a) I gave less time and thought to this than most of my friends. ☐
- (b) I rate a little below average. ☐
- (c) I rate about average. ☐
- (d) I rate a little above average. ☐
- (e) I gave more time and thought to this than most of my friends. ☐

33

34

10. Choosing a regular adult occupation:

- (a) I give less time and thought to this than most of my friends. ☐
- (b) I rate a little below average. ☐
- (c) I rate about average. ☐
- (d) I rate a little above average. ☐
- (e) I give more time and thought to this than most of my friends. ☐

11. Choosing a career in general:

- (a) I give less time and thought to this than most of my friends. ☐
- (b) I rate a little below average. ☐
- (c) I rate about average. ☐
- (d) I rate a little above average. ☐
- (e) I give more time and thought to this than most of my friends. ☐

12. How do you rate your plans for when you've finished your education? (Please tick the box next to the ONE statement that best describes your situation)

- ☐ Not at all clear or sure.
- ☐ Not very clear.
- ☐ Not clear for some things, clear for others.
- ☐ Fairly clear.
- 48 ☐ Very clear, almost decided.

13. Do you have any jobs in mind for when you have completed your education?

☐ Yes

☐ No

49-50

(IF YOU HAVE ANSWERED NO TO QUESTION 13 ABOVE,
PLEASE GO ON TO SECTION E)

14. If you have answered Yes to Question 13 above, please state below what types of jobs you are considering:

□□

15. Of the jobs you are considering, which is your first choice? (If undecided, write "undecided")

□

Keeping in mind the type of job you think you might like to go into when you've finished your education, how much do you know about the following aspects?

Please rate items 16-23 using this five-point scale

1. I know hardly anything about this aspect.
2. I know a little about this.
3. I know an average amount about this.
4. I know quite a lot about this.
5. I know a great deal about this aspect.

Place your ratings in the boxes.

16. What people really do on the job.

54

17. The abilities needed for that kind of occupation.

18. The working conditions that go with such jobs.

19. The education or training needed to get such a job.

20. The different ways of getting into that occupation.

21. The starting pay for that occupation.

22. The chances for advancing in that kind of occupation.

23. The working hours you would have in that occupation.

SECTION E

Career Problems

Try to answer all the following statements as mostly TRUE or mostly FALSE. Circle the answer that best represents your present opinion.

In planning for an occupation or career:

1. I need reassurance that I have made the right choice of occupation. T F
2. I am concerned that my present interests may change over the years. T F
3. I am uncertain about the occupations I could perform well. T F
4. I don't know what my major strengths and weaknesses are. T F
5. The jobs I can do may not pay enough to live the kind of life I want. T F
6. If I had to make an occupational choice right now, I am afraid I would make a bad choice. T F
7. I need to find out what kind of career I should follow. T F
8. Making up my mind about a career has been a long and difficult problem for me. T F

62

69

9. I am confused about the whole problem
of deciding on a career. T F
10. I am not sure that my present
occupational choice or job is
right for me. T F
11. I don't know enough about what
workers do in various occupations. T F
12. No single occupation appeals strongly
to me. T F
13. I am uncertain about which occupation
I would enjoy. T F
14. I would like to increase the number
of occupations I could consider. T F
15. My estimates of my abilities and
talents vary a lot from year to year. T F
16. I am not sure of myself in many areas
of life. T F
17. I have known what occupation I want to
follow for less than one year. T F
18. I can't understand how some people can
be so set about what they want to do. T F

SECTION F

Life Satisfaction

These items relate to how satisfied you feel with various aspects of your life.

Please rate each item using this seven-point scale.

1. I'm extremely dissatisfied
2. I'm very dissatisfied
3. I'm moderately dissatisfied
4. I'm not sure
5. I'm moderately satisfied
6. I'm very satisfied
7. I'm extremely satisfied

Place your ratings in the boxes

1. The house or flat that you live in.
2. The local district that you live in.
3. Your standard of living: the things you can buy and do.
4. The way you spend your leisure time.
5. Your present state of health.
6. The education you have received.
7. What you are accomplishing in life.
8. What the future seems to hold for you.
9. Your social life.
10. Your family life.
11. Taking everything together, your life as a whole these days.

1

11

Please, check back to make sure that you have completed each page of the Questionnaire.

Please bring this Questionnaire with you to the administration of Part Two.

THANK YOU VERY MUCH FOR YOUR HELP.

APPENDIX III (A)

Transcript of meeting for administration of Part Two of the CDQ

Before we begin, I'd like to thank you for giving up your time to participate in my study. When the session is over, I'll be giving your your confirmation notes for exemption from one of the first year psychology labs.

Did you all remember to bring the first questionnaire with you?

For those of you who did not, please stay behind after this session, so that we can arrange a time for you to return it.

You will note that the first questionnaire has a code on it. The first thing I'd like you to do when you receive your second questionnaire is to copy this code on to it. Do this now [Hand out the second questionnaire]. For those who did not bring their first questionnaire, I have a card here with a supplementary code on it. Write this code on to your second questionnaire. You can take this card home with you, and return it with the first questionnaire [hand out cards, if applicable].

Has everyone copied the code from, the first questionnaire, on to the second questionnaire ? [collect the first questionnaire].

This second questionnaire consists of four sections that, like the first questionnaire, covers a range of areas in our life that are related to our career development. At the beginning of each section are a set of instructions. Now, before you start, I'd like to go over these with you just to make sure every one knows what to do.

Turn to the first page [read out the instructions, and the brief description of each section, to participants].

Are you all clear about what it is you need to do ? There is no set time limit, but I'd like you to work as rapidly as you can. Don't dwell too long on any one question. If you do get stuck on a particular question, leave it for the time being, and go back to it once you've finished the section. For questions like these, the first answer that comes into your head is usually the best one.

Are there any questions ?

Once you've completed the questionnaire, could you please remain seated.

You can begin now.

[After every one has completed the questionnaire] Check that you've answered all of the questions. If you're unsure of an answer, make the best guess that you can.

Has everyone completed the questionnaire? I'll collect them now, and then tell you a little about my research.

[Collect the second questionnaire].

[Debriefing]

The purpose of my research is to examine the career development of recent school leavers. I'm interested in finding out:

- (i) how much knowledge about the world of work school leavers have;
- (ii) how aware school leavers are about their work-related interests, and needs;
- (iii) whether school leavers know how to organise this information to make some preliminary decisions; and,
- (iv) how well school leavers can generate plans about how these decisions can be realised.

I'm also interested in looking at the relationship between these aspects of career development and dimensions of psychological well-being and personality variables. The psychological well-being variable that I'm using in this research is life satisfaction. The personality variables include self-esteem, and locus of control. Locus of control refers to how much individuals feel in control of their life. So, first I'm asking 'what is the level of career development of recent school leaver's?', and second, 'is the school leaver's level of career development related to satisfaction with life, degree of self-esteem, and the extent to which they feel in control of their life?'

Basically, this research is an attempt to see how well schools are preparing their students for movement toward the world of work. That is, to see how well schools are operating to help their students make well-informed decisions about a career. I think that it is important to obtain this type of information, considering all of the changes that have occurred in schools during the past five or six years. Changes such as the re-organisation of the curriculum, the development of Transition Education, and so on. For the most part, these changes are taking place in an effort to help increase school students awareness of the types of jobs available to them so that on leaving school, individuals can make well-informed decisions about what type of jobs they'd like to do, and can make plans and undertake action toward their career goals.

This is especially important in today's world, where we have a major youth unemployment problem, and where the occupational structure is changing rapidly. School leavers entering the workforce need to know what is available to them so they do not waste time and energy looking for jobs that are in short supply, jobs for which they have no qualifications, and so that they do not attempt to obtain jobs that offer no sense of satisfaction, since this can lead to a great deal of unhappiness, loss of motivation, and commitment. Those training for a particular occupational field also need to know as much about the area as they can - they need to know if their decision to undertake a particular education or training course is a wise one - do they know what types of jobs that their education or training will equip them for? Will they be satisfied with such a job? Will such a job be available once they've completed their education or training course? What are the promotional aspects of the particular job?

Although schools have made great strides toward such developments as transition education, and the provision of a wider choice of subjects in the curriculum, not much is known about how well these efforts are working to help students make well-informed decisions about a career. Lack of adequate resources is probably part of the reason as to why schools fail to carry out sound, objective, evaluation research, although I also suspect that a major part of the problem has to do with the low priority that such research has amongst policy-makers. From what I've read so far, it seems that the people who make decisions

about changes in schools nevertheless lack basic knowledge about the nature and value of evaluation research. Hence, they do not seek the assistance of qualified researchers, and consequently, only a limited range of largely inadequately conducted studies are carried out. Under these circumstances, I believe that it is important to demonstrate why schools need to evaluate adequately, the changes they are making, and also, how schools can begin, and continue to evaluate these changes in an adequate, and therefore objective manner.

Since my research is largely exploratory, and since I've only drawn from a limited range of school leavers, any conclusions that I draw from the results will have limited generalisability.

However, my aim is not to demonstrate how well the secondary education system is preparing their students for movement toward the world of work, such a task would require a sample representative of all schools in New Zealand, and a sample representative of all school leavers in New Zealand. Instead, the main aim of this research is to demonstrate that it is both necessary and possible to carry out such an evaluation.

So, although I will not be able to generalise the findings from this research, to all schools, and to all school leavers, I hope that I will be able to stimulate objective research in this area, and to provide some good suggestions about how other researchers can go about such research.

I am quite aware that your participation in this research may have raised some personal questions and issues related to your own career development. This is not unexpected, since you have been asked to answer some questions about areas of your career development that you may not have thought about before.

For this purpose, I have a pamphlet here that provides information about who you can contact if you wish to discuss your career-related questions and problems with. The people listed in this pamphlet are professional counsellors, and have specialised training in the area of career counselling and advice. If you are interested in finding out information about the types of jobs that are available to you, or if you have any problems in making career-related decisions, then do attempt to get in contact with one or more of these people. After all, it is their job to provide you with information about job opportunities, and to help you resolve any career-related problems you may have. I'll hand these out now [hand out pamphlets]. I'd like everyone to take a pamphlet, you may not necessarily need such help right now, but have one all the same, since you may find that you need this information at a later date.

I have just two more issues to bring up before I'll open up the floor for any questions or comments about the study that you may have.

First, since I am running a series of sessions for participants to answer the second questionnaire this week, I'd really appreciate it if you do not talk to other students who are participating in this research, and have not yet completed their second questionnaire. It is important that other students do not know about the types of questions provided in the second questionnaire, or about the aims of this research. This could introduce bias into their answers when they come to do the second questionnaire, which, in turn, may distort the final results. So, if you are put into a situation where you are asked about this research, let the person know that it would be unfair to tell them anything, because of the danger of introducing bias, and perhaps you could also mention that if you were to tell them anything, then it would spoil the surprise (not that there is a surprise, but it helps to maintain their commitment toward completing the research).

The final piece of information relates to feedback about this research. Once I've completed a preliminary analysis of the data, I will be sending you a follow-up letter to inform you of the preliminary results of this research, and to provide you with some tentative conclusions. Hopefully, I will have the preliminary

analysis completed by the end of August, so you should receive the feedback letter around the middle of September.

Thank you all for your help with this research. Does any one have any questions or comments about the study ?

[Before participants leave, make sure they receive their confirmation slips for exemption from a lab].

[Remind any participants, who left their first questionnaire at home, to remain behind].

APPENDIX III (B)

Career Development Questionnaire, Part II

C A R E E R
D E V E L O P M E N T
Q U E S T I O N N A I R E

PART II

ALL REPLIES TO THIS QUESTIONNAIRE
WILL BE DEALT WITH IN STRICT CONFIDENCE

This questionnaire is in four **SECTIONS**. Please work through each section in turn. There is no set time limit, but work as rapidly as you can; the first answer that comes to you is often the best one.

SECTION A asks you about your feelings in different situations.

SECTION B asks for your opinion about general issues in our society.

SECTION C asks you about your attitudes toward certain events in the world of work.

SECTION D asks for your opinion about a number of issues people confront when planning for a career.

Please read all instructions carefully as you go
through each section

SECTION A

Directions

Below, you will find a list of statements about feelings. If a statement describes how you usually feel, put an X in the column "Like Me". If a statement does not describe how you usually feel, put an X in the column "Unlike me". There are no right or wrong answers. Begin at the top of the page and mark all 25 statements.

LIKE	UNLIKE	
ME	ME	

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Things usually don't bother me. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. I find it very hard to talk in front of a group. |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. There are lots of things about myself I'd change if I could. |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. I can make up my mind without too much trouble. |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. I'm a lot of fun to be with. |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. I get upset easily at home. |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. It takes me a long time to get used to anything new. |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. I'm popular with persons my own age. |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. My family usually considers my feelings. |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. I give in very easily. |

LIKE
ME

UNLIKE
ME

- | LIKE
ME | UNLIKE
ME | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 11. My family expects too much of me. |
| <input type="checkbox"/> | <input type="checkbox"/> | 12. It's pretty tough to be me. |
| <input type="checkbox"/> | <input type="checkbox"/> | 13. Things are all mixed up in my life. |
| <input type="checkbox"/> | <input type="checkbox"/> | 14. People usually follow my ideas. |
| <input type="checkbox"/> | <input type="checkbox"/> | 15. I have a low opinion of myself. |
| <input type="checkbox"/> | <input type="checkbox"/> | 16. There are many times when I would like to leave home. |
| <input type="checkbox"/> | <input type="checkbox"/> | 17. I often feel upset with my work. |
| <input type="checkbox"/> | <input type="checkbox"/> | 18. I'm not as nice looking as most people. |
| <input type="checkbox"/> | <input type="checkbox"/> | 19. If I have something to say, I usually say it. |
| <input type="checkbox"/> | <input type="checkbox"/> | 20. My family understands me. |
| <input type="checkbox"/> | <input type="checkbox"/> | 21. Most people are better liked than I am. |
| <input type="checkbox"/> | <input type="checkbox"/> | 22. I usually feel as if my family is pushing me. |
| <input type="checkbox"/> | <input type="checkbox"/> | 23. I often get discouraged with what I am doing. |
| <input type="checkbox"/> | <input type="checkbox"/> | 24. I often wish I were someone else. |
| <input type="checkbox"/> | <input type="checkbox"/> | 25. I can't be depended on. |

SECTION B

Below is a series of items about the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives, lettered A or B. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned.

In some instances, you may find that you believe both statements to be true. In such cases, be sure to select the ONE (A or B) you more strongly believe.

Place your answers (A or B) in the boxes.

1. (A) Children get into trouble because their parents punish them too much.
(B) The trouble with most children nowadays is that their parents are too easy with them.
2. (A) Many of the unhappy things in people's lives are partly due to bad luck.
(B) People's misfortunes result from the mistakes they make.
3. (A) One of the major reasons why we have wars is because people don't take enough interest in politics.
(B) There will always be wars, no matter how hard people try to prevent them.
4. (A) In the long run people get the respect they deserve in this world.
(B) Unfortunately an individual's worth often passes unrecognised no matter how hard he or she tries.
5. (A) The idea that teachers are unfair to students is nonsense.
(B) Most students don't realise the extent to which their grades are influenced by accidental happenings.

6. (A) Without the right breaks one cannot be an effective leader.
(B) Capable people who fail to become leaders have not taken advantage of their opportunities.
7. (A) No matter how hard you try, some people just don't like you.
(B) People who can't get others to like them don't understand how to get along with others.
8. (A) Heredity plays the major role in determining one's personality.
(B) It is one's experiences in life which determine what they're like.
9. (A) I have often found that what is going to happen will happen.
(B) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10. (A) In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
(B) Many times exam questions tend to be so unrelated to course work that studying is really useless.
11. (A) Becoming a success is a matter of hard work, luck has little or nothing to do with it.
(B) Getting a good job depends mainly on being in the right place at the right time.
12. (A) The average citizen can have an influence in government decisions.
(B) This world is run by the few people in power and there is not much the little guy can do about it.
13. (A) When I make plans I am almost certain that I can make them work.
(B) It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. (A) There are certain people who are just no good.
(B) There is some good in everybody.
15. (A) In my case getting what I want has little or nothing to do with luck.
(B) Many times we might just as well decide what to do by flipping a coin.
16. (A) Who gets to be the boss often depends on who was lucky enough to be in the right place first.
(B) Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
17. (A) As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
(B) By taking an active part in political and social affairs the people can control world events.
18. (A) Most people don't realise the extent to which their lives are controlled by accidental happenings.
(B) There really is no such thing as "luck".
19. (A) One should always be willing to admit mistakes.
(B) It is usually best to cover up one's mistakes.
20. (A) It is hard to know whether or not a person really likes you.
(B) How many friends you have depends upon how nice a person you are.
21. (A) In the long run the bad things that happen to us are balanced by the good ones.
(B) Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. (A) With enough effort we can wipe out political corruption.
- (B) It is difficult for people to have much control over the things politicians do in office.
23. (A) Sometimes I don't understand how teachers arrive at the grades they give.
- (B) There is a direct connection between how hard I study and the grades I get.
24. (A) A good leader expects people to decide for themselves what they should do.
- (B) A good leader makes it clear to everybody what their jobs are.
25. (A) Many times I feel that I have little influence over the things that happen to me.
- (B) It is impossible for me to believe that chance or luck plays an important role in my life.
26. (A) People are lonely because they don't try to be friendly.
- (B) There's not much use in trying too hard to please people, if they like you, they like you.
27. (A) There is too much emphasis on athletics in high school.
- (B) Team sports are an excellent way to build character.
28. (A) What happens to me is my own doing.
- (B) Sometimes I feel that I don't have enough control over the direction my life is taking.
29. (A) Most of the time I can't understand why politicians behave the way they do.
- (B) In the long run the people are responsible for bad government on a national as well as on a local level.

SECTION C

Choose the **one best** answer to each of the following items about career development and the world of work.

Please place your answers in the boxes

1. The best way to find out about yourself is to:
 - A take some aptitude tests.
 - B ask other people what they think.
 - C read newspapers and magazines.
 - D try yourself out in many different situations and activities.

2. Exploring interests, abilities, and opportunities is something which people should be encouraged to engage in:
 - A throughout their lives.
 - B when they become dissatisfied with the way things are.
 - C when they lose their jobs.
 - D when things start to go wrong.

3. When careers teachers or advisors encourage students to think about themselves and the world about them, what they usually want them to do is:
 - A to be active in school affairs.
 - B to go on excursions.
 - C to try themselves out in a variety of situations.
 - D to take some aptitude tests.

4. Which of the following will help secondary school students **most** in thinking about a career?
- A making the right contacts.
 - B setting an occupational goal early and sticking to it.
 - C finding out where the best opportunities for employment are.
 - D finding out what activities and subjects they like most and are best at.
5. The reason why so many young people change jobs frequently between the ages of 18 and 25 is that:
- A they don't know when they are well off.
 - B they received wrong advice from their parents and teachers.
 - C they find it difficult to get up in time.
 - D they don't know enough about themselves or work to make good choices.
6. The most important thing about the courses or jobs you can take after you leave school is:
- A what they tell you about your interests and abilities.
 - B whether your parents approve of your choice.
 - C whether they are easy or difficult.
 - D what your instructors or employers think of you.
7. By age 25 most young workers have stopped changing jobs and are ready to 'settle down'. This is because:
- A they have learnt that you lose more than you gain by changing jobs.
 - B they realize that changing jobs only gives you a bad reputation.
 - C they now have a better picture of what they and the world of work are like.
 - D most employers won't take on people who have moved around a lot.

8. Being happy in a job is mostly a matter of:
- A being paid well.
 - B knowing what you want from a job and getting it.
 - C having interesting things to do when your day's work is done.
 - D receiving promotions and pay increases.
9. In starting a new job, it is most important to:
- A make sure that the other workers like you.
 - B show the other workers that they can't put anything over you.
 - C show that you are your own boss.
 - D be aware of how others feel about things.
10. In dealing with customers or clients, it is generally most important to:
- A show them that you know more about your work than they do.
 - B understand what they want and see if you can help them get it.
 - C make sure that you do only as you are told.
 - D make your employer look good, no matter what.
11. Which of the following is most important in a job application interview?
- A telling the interviewer you will do any work so long as the job is a good one.
 - B knowing what salary or pay to ask for.
 - C finding out whether you and the job are right for each other.
 - D being introduced by a mutual friend.
12. To find out about local job opportunities, one would go to the:
- | | |
|---------------------------|-----------------|
| A Citizens Advice Bureau. | C City Council. |
| B Labour Department. | D NZCTU. |

13. The most detailed and complete information about recent employment trends in New Zealand is published in:
- A National Business Review.
 - B Management.
 - C Personal Investor.
 - D New Zealand Standard Classification of Occupations.
14. Which one of the following occupations belongs to an occupational family or field of work which is different from that of the other three?
- A bricklayer
 - B carpenter
 - C house painter
 - D telephone technician
15. One of the things that great artists, musicians, and professional athletes have in common is the desire to:
- A make money.
 - B have large audiences.
 - C be the best there is at what they do.
 - D teach others to do what they do.
16. The occupational fields expected to grow most rapidly during the next ten years are:
- A professional and service.
 - B sales and crafts.
 - C unskilled labour and sales.
 - D managerial and unskilled labour.
17. Porters usually learn their jobs:
- A in high schools.
 - B in apprenticeships or on-the-job training.
 - C in universities.
 - D in polytechnics.

18. Computer programmers are commonly trained:
- A in polytechnics.
 - B in high schools.
 - C in colleges of education.
 - D in universities.
19. Medical laboratory technicians are most likely to use:
- A spirit levels. C log tables.
 - B clinical thermometers. D microscopes.
20. Bricklayers are most likely to use:
- A boring machines. C sledge hammers.
 - B planes. D trowels.
21. A stockbroker is most likely to use:
- A an audiometer. C a metronome.
 - B calipers. D a telex machine.
22. An artist is most likely to use:
- A charcoal. C petchblende.
 - B heavy water. D sodium.
23. Book-keepers are most likely to use:
- A lathes. C ledgers.
 - B copiers. D slide rules.
24. Equal opportunity legislation is now making more opportunities for:
- A women. C dropouts.
 - B graduates. D old people.

SECTION D

What should each of the following students do?

Choose the one best answer in each case.

Please place your answers in the boxes

1. E.R. took some tests and got results showing promise for clerical work. E.R. says "I just can't see myself sitting behind a desk for the rest of my life. I'm the kind of person who likes variety. I think a travelling job would suit me fine".

E.R. should:

- A disregard the tests and do what he or she wants to do.
- B do what the tests say since they know best.
- C look for a job which requires clerical ability but does not pin one to a desk.
- D ask to be tested with another test, since the results of the first ones are probably wrong.

2. D.J. is in the sixth form with excellent school results and very high scores on ability tests, but no educational or vocational plans. What is the best advise one could give D.J.?

- A to arrive at a definite goal as soon as possible.
- B not to be too concerned about a goal or a plan because success is almost certain.
- C to concentrate on selecting the right college or university.
- D to find out when important choices will have to be made and get the needed information.

3. A.M. is very good with skilled handwork, has good mechanical aptitude, and is the best student in the class at art and mathematics. A.M. likes all these things.

What should A.M. do?

- A look for an occupation that will use as many of these interests and abilities as possible.
 - B pick an occupation which uses maths since there is a better future in that than in art or in working with one's hands.
 - C decide now to follow only one of these abilities or interests, and pick an occupation which uses that kind of asset.
 - D put off deciding about the future and wait until interest in some of these activities declines.
4. An uncle just told T.H. that his company is always looking for tool and die makers, pays them well and keeps them on the payroll even in bad times. T.H. is interested and wants to learn more about the occupation.

What is the most important thing for T.H. to learn first?

- A where tool and die makers work.
 - B how much training is required.
 - C what is the work that tool and die makers do.
 - D what tool and die makers are actually paid.
5. L.F. doesn't really care what kind of work is available on leaving school as long as it is working with people.

If this is all L.F. cares about, he or she is likely to make a bad choice because:

- A this kind of work usually requires a degree.
- B employers usually hire people who know definitely what they want to do.
- C working with people is usually looked down on because it doesn't pay very well.
- D occupations working with people can be very different from each other in the abilities and interests which are needed.

6. R.A. has good results in all secondary school subjects, wants to go to a college or university, has parents' approval for doing this, but has no occupational plans.

What is the best next step for R.A.?

- A delay going to college or university until occupational plans emerge.
- B choose a course that is difficult enough to be challenging.
- C choose a college or university where it is possible to explore several courses in the first year or two.
- D find out about requirements for higher degrees or professional training.

7. A.K. can't decide whether to become an air-conditioning and refrigeration technician or an engineer.

In making the choice, to which of the following should A.K. pay the most attention?

- A how much money A.K. wants to earn.
- B how much education and training A.K. is likely to be able to get.
- C what A.K.'s parents would prefer.
- D which occupation people respect most.

8. B.D.'s interest in and skill at helping others has become the most important part of B.D.'s self-picture.

Which occupation should B.D. probably **not** be considering?

- A nurse's aide.
- B recreation worker.
- C caretaker.
- D teacher's aide.

9. M.B. has decided to leave school and take a semi-skilled factory job at a good wage instead of an apprenticeship.

In taking this step, M.B.:

- A would be giving up a better future for a better present.
- B should be able to work his or her way up to a more skilled job easily enough.
- C is probably following the advice of the careers teacher or advisor.
- D is probably giving in to pressure from parents.

10. J.D. might like to become a computer programmer, but knows little about this job and is going to the library to find out more about it.

The most important thing for J.D. to find out at this stage is:

- A what the work is and what one does on the job.
- B what the pay is.
- C what the hours of work are.
- D where one can get the right training.

11. After careful thought, E.K. has decided on business training for a year or two after leaving school. However, deciding between courses in accounting and sales remains a problem for E.K.

In exploring this problem, to what should be given the most weight?

- A the difference in training time required by the two courses.
- B the chances of being admitted for training in the courses.
- C which course requires more work.
- D which course best fits E.K.'s abilities and interests.

12. J.F. is the best all-round artist in the class, winning art competitions consistently. But academic work comes hard to J.F., who will probably finish near the bottom of the final year class.

Which is the most realistic educational plan for J.F.?

- A forget about art and concentrate on subjects necessary to get into university.
- B seek admission to an art school where low academic results may not be a handicap.
- C forget about any education beyond secondary school.
- D seek admission to a course where one can combine art and regular academic subjects to earn a Bachelor of Fine Arts.

THIS IS THE END OF PART TWO OF THE
CAREER DEVELOPMENT STUDY.

Please, check back to make sure that you have
completed each page of the Questionnaire.

THANK YOU VERY MUCH FOR YOUR HELP.

APPENDIX III (C)

Note for exemption from part of a course requirementMASSEY UNIVERSITY
DEPARTMENT OF PSYCHOLOGY

This is to confirm that has completed the equivalent requirement of one 75.101 or one 75.102 laboratory tutorial by taking part as research subject in my study; and, therefore, has permission to be exempt from one of these laboratory tutorial sessions.

.....

Diana Bloor.

APPENDIX IV

Feedback Letter to Research Participants

Department of Psychology
Massey University
PALMERSTON NORTH

25 September, 1990

Dear,

Earlier this year you co-operated in my research which looked at the career development of recent school leavers. I now have a set of preliminary findings to report back to you. These findings are based on a sample of 157 first and second year university students, aged between 17 and 20 years of age. I was particularly interested to see how 'well' schools help their student's to make decisions about their future careers. To do this, I looked at how 'well-prepared' school leavers are, to make career-related decisions. I found that many school leavers have not decided what they want to do, with regard to a particular career. I also found that many of these individuals simply need (i) information about the types of jobs that are available to them in the world of work; and/or (ii) to clarify what their particular career-related interests and needs are; and/or (iii) to know how to organise this information to make some preliminary decisions; and/or (iv) to know how to make some coherent and realistic plans about how such decisions can be realised.

The second part of this research looked at how satisfied recent school leavers are with their life, their level of self-esteem, and how much recent school leavers feel 'in control' of their lives. I related these variables to the degree to which school leavers had decided on a preferred career. It was found that those who were relatively clear about what they wanted to do were also quite satisfied with their life, and felt fairly confident in themselves. Those who were less clear about where they were heading, generally were found to be a little less satisfied with their life, and did tend to be a little less confident. However, I did not find any relationship between the degree to which school leavers had decided on a preferred career and the extent to which they felt 'in control' of their life.

Of course, these results suggest that school leavers who are less clear about a preferred career are also less satisfied with their life, and less confident in themselves. However, these results are only correlational, and not causal. This means that being undecided about a preferred career does not necessarily lead to an unsatisfying life, or to being less confident. Similarly, we cannot say that because we are decided about a career, we will be satisfied with our lives, and self confident. Many different things happen in our lives that make us satisfied/unsatisfied or confident/unconfident. For some of us, making a decision about a career may be something that we feel is not as important, right now, as other things may be. For others, having an idea of the type of job we would like to do may be very important to us right now.

If you would like information about the type of career you are interested in, or if you would like to know what types of jobs are available to you, there are a number of professional career counsellors available who will ensure you receive the correct information, and who will help you with any career-related issues or problems you may have. For this purpose, I have enclosed, with this letter, a pamphlet that includes the name and contact phone number of professional career counsellors, whose job it is to help you with your career-related questions. As you will see, these include people who are available both on and off campus, so you are not limited to 'who' you can go to.

Thank you for participating in this study. I will be making more detailed findings available to schools and guidance staff, to other researchers, and to policy-makers in the hope that they may find it useful in developing and evaluating career/transition education programmes. Please contact me if you would like any further information.

Yours sincerely,

Diana Bloor.

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