RECENT GRADUATES AND THE LABOUR MARKET

A Study of Graduate Expectations and Experiences in New Zealand

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Abstract

This research examined graduate transitions from study to work in New Zealand by investigating the expectations, experiences, and satisfaction with early career for three consecutive graduate cohorts. It was timely, in light of increasing participation in tertiary education; a national emphasis on the development of a learning society and lifelong learning; and the unpredictable and highly competitive labour market in New Zealand. Several key findings emerged from this study, notably: graduates encountered significant turbulence in the first eighteen months of their career; and whilst most graduates had entered stable employment, in many instances they were underemployed.

The findings challenge the limited nature of current data collection processes for the annual New Zealand Vice Chancellors Committee graduate destinations report. Given the importance, both politically and socially, of the need for accurate reporting, it is essential for the current data collection techniques to be revisited.

CHAPTER 1: *Introduction*

It is generally accepted that one of the most significant reasons many people choose to study today is to improve their employment opportunities (Corson, 1988; Cox and Pollock, 1997; Muysken and ter Weel, 2001). However, in today's competitive market driven global economy, many western nations have reported their graduates as struggling to find relevant, graduate level employment upon graduation (Lau and Pang, 2000; Gray and Chapman, 1999). Take, for example, the following article titles from around the globe –

> *"Are more college graduates really taking 'high school' jobs?" – United States*
>
> *"Spring is here and grads are nervous" – Canada*
>
> *"Hell hath no fury like a graduate waiting on tables" – United Kingdom*
>
> *"Underemployment in the Netherlands: Why the Dutch 'Poldermodel' failed to close the education-jobs gap" – The Netherlands.*
>
> *"IT industry offers no guarantees for graduates (disillusioned information technology graduates who cannot get jobs complain the skills shortage is a myth" – New Zealand*

Within New Zealand there was a need to develop a more comprehensive understanding of the transitions of New Zealand graduates into the labour market, with a particular emphasis on the extent to which they have achieved satisfactory employment outcomes. This included the importance of looking beyond the likelihood of getting any job to that of obtaining certain types of jobs (Smith, McKnight and Naylor, 2000).

Assessing the quality of graduate employment is important because while New Zealand graduates may not be unemployed, they may very well be underemployed. Underemployment, at its simplest, represents a mismatch between the level of educational attainment and the educational requirement of an occupation (Borghans and de Grip, 2000). This is argued to be one effect of the significant investments into

education that have been made by many industrialised nations and the inability of market economies to absorb the steadily increasing supply of well-educated workers (Asplund and Lilja, 2000).

Despite this arguable dilemma, there is a clear tendency for governmental policies to relentlessly emphasize the importance of life long learning through educational reform, in order to improve economic competitiveness. Significant social change over recent decades has impacted on the role of education and expectations of its potential benefits (Corbett, 1996). Many developed nations, focused on changing societal structures, talk of the knowledge wave, or society and the information era, demanding the constant up-skilling of all labour market participants. The rising requirements for knowledge, qualifications and skills, and ageing populations, dictates that few countries can afford to have their young people entering the labour force unequipped to deal with changing career patterns in the longer term (OECD, 2000).

In a recent comprehensive review of the New Zealand tertiary education system, the Tertiary Education Advisory Commission (TEAC) echoed this sentiment, arguing that, "The demands that the knowledge society makes ... will necessitate New Zealand becoming very serious about lifelong learning" (TEAC Initial Report, 2000, p.11). They also emphasised the conclusions of the Dearing Report into Higher Education in Britain, which stated,

> Tertiary education has become central to the economic well being of the nation and individuals. The qualities of mind that it develops will be qualities that society increasingly needs in order to function effectively. Knowledge is advancing so rapidly that a modern competitive economy depends on its ability to generate knowledge, engage with it and use it to effect" (Dearing, 1997 cited in TEAC Initial Report, 2000, p.11).

However, societal expectations of a better-educated population generating benefits for wider society and nurturing a more productive national economy are, most

likely, far from the mind of an individual deliberating about the expenditure of thousands of dollars on a useful tertiary education (Edlin, 1994).

In New Zealand, like many other OECD countries, education participation rates increased dramatically in the late 1980s and early 1990s, in response to difficult economic conditions and high unemployment (Ministry of Education, 1999). Both at a societal and individual level there has been an increasing expectation for education to act as a guaranteed ticket to improved labour market opportunities (Collins, 1979). It could be argued, despite the absence of empirical evidence to substantiate such a claim, that the introduction of higher individual fee structures and student loans intensified this expectation in New Zealand. The 'consumer' concept of purchasing one's education has created a new contractual mind set with an accompanying set of expectations previous generations were not required to consider (Roberts and Peters, 1998).

However, at a time when education is expected to deliver more than before, the transition from education to the labour market for university graduates is increasingly recognised as a difficult and uncertain process. The structural adjustment of world economies to globalisation, increased market competition, and the information and telecommunication revolution have had a dramatic impact on the structure of organizations and the nature of positions within them (Carnoy, 1998). Aitken (1994) goes as far as to suggest that today's competitive business environment has created a potential bottleneck of people unable to secure employment in their chosen field or at their expected credential level. This has been aggravated by an education system producing more highly and widely educated people than ever before.

Beyond the level of tertiary qualification, there are many factors that are thought to impact on the transition process from study to work and the relative success of labour market outcomes. These include demographic variables like age, gender, geographic location and work experience (Aitken, 1994; Egerton, 2001; Russell and

O'Connell, 2001; Smith et al, 2000). In addition study choices, field of study, mode of study, and employment outcomes may have implications for employment outcomes (Connor and Pollard, 1996).

Current knowledge of graduate transitions in New Zealand

Within New Zealand, the New Zealand Vice Chancellors Committee (NZVCC) conducts an annual Graduate Destinations Report across all New Zealand universities approximately six months after graduation. This has provided extensive aggregate data on the status of graduates at that time. However, very little research has been carried out examining the on-going labour market experiences of university graduates in the first few years following graduation. Given the turbulent nature of early graduate careers (Connor and Pollard, 1996), Holton (1999) suggests responses gained from graduates following at least one year of graduation may be more stable indicators of later career outcomes. Lau and Pang (2000) further argue that in the first few years after graduation "the meanings of 'career' and 'job' are seen as indistinguishable... job related decisions are of greater concern than career-related decisions since jobs are more exploratory, more flexible, and require less commitment than careers" (p.143).

RESEARCH PURPOSE AND QUESTIONS

The purpose of this study was to provide a more comprehensive understanding of employment expectations and experiences for New Zealand graduates, and implications for early career satisfaction in the context of tertiary education in New Zealand. Seven research questions were developed to investigate the transition from study to work. They were:

(1) What are the trends in tertiary participation within New Zealand?

(2) What influenced the study choices of these graduates?

(3) What were their employment expectations following completion of their degree and did these alter while they were studying?

(4) What is the nature of the transition process from education to work, in terms of the ease of transition and any turbulence or changeability in their early careers?

(5) What do graduates identify as the main reasons for their labour market experiences other than stable employment?

(6) What are the current employment circumstances of the graduates in stable employment, including the extent and nature of any underemployment?

(7) To what extent are graduates satisfied with their overall study choices and career development?

The next chapter reviews relevant literature in order to establish a contextual setting for this study and examines the state of knowledge in relation to the research questions. Chapter 3 outlines the present study and provides a rationale for the methodology adopted in this research. The methodological process outlined in Chapter 4 includes the sample population and selection of participants; collection of data and survey response; the questionnaire; and type, style and format of questions. The nature of the respondent sample is described in Chapter 5 and the results reported in Chapter 6. Chapter 7 discusses the six research questions in relation to both the results and the relevant literature. Also addressed were limitations of the study. The final chapter summarises the overall findings and highlights some useful considerations for key stakeholder groups in education. This incorporates both the utility of the findings, and the implications for future research.

CHAPTER 2: *A Review of the Literature*

Tertiary Participation in Context

Over the past two decades, significant changes have been made to the economic and societal structures of nations worldwide, in response to forces such as globalisation, market-driven deregulation and competition, and the 'information and communications revolution' (Carnoy, 1995). As countries and their citizens grappled with these structural adjustments, two well-documented reactions were observed to occur concurrently within the education systems of many of these nations (Dugdale, 1997; Woodley & Brennan, 2000). Firstly, many governments introduced educational reforms based upon the notions of lifelong learning and developing learning societies. This was coupled with a rapid and unprecedented growth in tertiary education participation rates.

LIFELONG LEARNING

Before examining the way these changes unfolded within the New Zealand context, it is useful to briefly review the debate surrounding the concept of lifelong learning within the literature. This assumes particular importance given its consistent use, in tandem with the ideal notion of the 'knowledge society', in the rhetoric of both international organisations and national governments, to justify the need for significant educational policy adjustments (Tight, 2000; Gustavsson, 2002). For example, the preamble of the Tertiary Education Advisory Commission's Report (2000), stated;

> Education provided by tertiary education providers, businesses and community groups is vitally important to New Zealand in building a true knowledge society and achieving the economic benefits for such a society. The quality of our knowledge and skills base will determine New Zealand's future success in the global economy and as a cohesive society (p. 32)

While the phrase lifelong learning has been used liberally in recent decades, its origins have been credited to the work of Dewey, Lindeman and Yeaxlee in the early part of last century (Jarvis, 1995 cited in Tight, 2000). At its simplest, the central tenet espoused was the provision of education, and individual involvement in learning, throughout life. However, Edwards (1995 cited in Alhiet, 1999) suggests the notion of the learning society is widely accepted, in part, because "its conceptual clarity is extremely limited and that very different notions can hide behind it" (p.66). Three alternative models, with distinct philosophical underpinnings, have been identified as being used to define the 'learning society'. These include a free, democratic education society with equal access to, and opportunities in, education. An alternative model of the learning society is identified as a free education market with competing educational institutions aimed at improving people's employability and potential productivity, raising their levels of qualification and creating a national economic advantage through human capital. The final approach identified is one that values open learning systems whereby a wide range of skills and capabilities can be developed according to the individuals' notions of their own learning needs (Alhiet, 1999).

Gustavsson (2002) argues that during the 1980s the rhetoric surrounding education and its role within society underwent a radical redefinition. Education, as a critical function within civilised society, and the notions of the knowledge society and lifelong learning were dislodged from their humanistic and democratic roots and transported into the economic language of human capital and productivity. This is in line with the concept of a competition-based, market-driven education model outlined above, where "learning is for acquiring skills alleged to enable the learner to work harder, faster and smarter and thus enables their employer to better compete in the global economy" (Boshier, 2001, p. 368).

McKenzie and Wurzburg (1997) argue that in the light of the on-going structural changes impacting on all OECD economies, the notion of lifelong employability and the capacity to remain productive necessitates the development of effective

strategies for the promotion of lifelong learning. Reflecting this perspective, three drivers of the shifts in educational policy by many OECD nations have been competition, finance and equity (Carnoy, 1995).

Fundamental to these principles is the notion of education as an investment made by individuals in order to maximise their own potential both in the labour market and society. Consequently, it is argued they should contribute towards this betterment financially, based on the positive individual rewards it will provide (Boshier, 2001). Contemporary free market ideology argues that the market will best deliver the outcomes of quality and efficiency in the education system where consumer choice of learners is unfettered (Baldwin & James, 2000).

However, the problems associated with defining education as an investment need to be recognised. "The more the language of investment dominates and is accepted not only as rational in its own terms but as the only language, the more difficult it will be for learning activities which cannot show a visible return, especially a quick return, to justify themselves. This is a serious problem in an accountancy-driven society" (Schuller, 1998, p.17). In addition to promoting an outcomes driven approach to education, the economic model also assumes decisions made by consumers are rational and well informed. Laker (2002) argues that while students are assumed to be informed consumers regarding their educational choices, frequently their decisions are based on extremely limited or inaccurate information.

Irrespective of the model one adheres to in defining the way it should be achieved, it is argued that fundamental to the creation of the modern learning society is the availability of education to all members of society, should they want to participate. Therefore, at its heart, the notion of lifelong learning is articulated in distinction to 'front-end' education, where education was seen as essentially confined to childhood. It is focused rather on the availability of education and individual involvement in learning throughout life (Tight, 2000).

THE NEW ZEALAND CONTEXT

Changes to the education system of any society do not exist within a vacuum but rather within a unique economic, political and societal context. Within New Zealand it is useful to briefly consider the distinctive context within which significant educational policy change took place in the late 1980s and early 1990s. Schuller and Bamford (2000) also suggest a useful approach to understanding the functionality of an education system within a national context is through the notion of social capital. This is differentiated from the concept of human capital which describes the skills, knowledge and experienced possessed by an individual or population, viewed in terms of their value or cost to an organisation or country. Rather, social capital is concerned with how the development of human capital is "encouraged or inhibited by the relationships which exist between the stakeholder institutions"(Schuller and Bamford, 2000, p. 7). Extending the work of Putnam, a significant contributor to the work on social capital theory, Grootaert (1997 cited in McClenaghan, 2000) argues social capital incorporates formal institutional relationships between state institutions, the political system and the more informal web of interactions at local and community levels. "The social capital of a society includes the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development" (Grootaert 1997 cited in McClenaghan, 2000, p. 570). Therefore, in addition to identifying the key stakeholders within New Zealand concerned with the delivery and outcomes of education, it is also necessary to be mindful of the relative power and influence these interdependent groups have had during the significant shifts in societal and political orientations towards education.

Expectations regarding the role of education in modern society emanate from a range of stakeholder groups in New Zealand. In addition to the individual participants, governments, both national and local, employers, communities and family, and finally, educational providers themselves, speak increasingly in terms of the need for accreditation, upskilling, and the development of a learning society. From the perspective of government, achieving high participation rates in formal

education programmes was viewed as a necessary for the promotion of economic development and international competitiveness (McKenzie and Wurzburg, 1997; Tertiary Education Commission, 2002).

Educational Reforms in early 1990s

From the late 1980s, New Zealand has witnessed significant and on-going changes to the delivery of tertiary education. The catalyst for these changes was almost certainly the 1984 election of the 4th Labour Government with its radical agenda of economic reforms centred on the neo-classical ideologies of market liberalism and efficiency (Roberts, 1999). New Zealand's economy moved from one of the most tightly regulated to one of the least regulated in the world, exposing both private and public institutions to the opportunities and challenges associated with competing in the global marketplace. Post-compulsory education, viewed by both Labour and National governments as a crucial ingredient to promoting economic growth and development in New Zealand, encountered significant upheaval. This was not only through significant policy changes to the provision and delivery of tertiary education within New Zealand society but, as a result of these policy shifts, exposure to strong market forces.

It is argued that in New Zealand, as in many western nations, education was reduced to the status of commodity to be placed on the free market, where competition and demand would ensure quality and efficiency (Roberts, 1999; Baldwin and James, 2000; Boshier, 2001). With reference to the Education Act 1990, Boshier observed:

> Universities and tertiary institutions were folded together. Tertiary Education Institutions (TEI) became profit centres or enterprises... There would be a cult of efficiency, a level playing field and competition pitting state-funded agencies against each other and numerous PTE's (private training enterprises)... There was a deliberate attempt to substitute the language of business for that of the university. Students became clients, vice chancellors were CEO's (p.365).

One of the significant drivers of competition between tertiary institutions for the growing student market was the mode of government funding throughout the 1990's. The funding formula, based primarily on EFTS (Equivalent Full-time Students), focused educational providers almost exclusively on increasing participation rates (Boshier, 2001; Tertiary Education Commission, 2002). This arguably led to redundant duplication of study programmes and a decline in quality standards (Tertiary Education Advisory Commission, 1999). For individual students, participation in tertiary study also meant paying significantly higher individual fees and uplifting student loans to cover both these university fees and living costs while studying. These new initiatives emphasised the individualist notions underpinning the 'new right' policy changes of this period. As Tobias (1999) argued, "The needs of individual learners are seen to be at the heart of the new system. It is claimed it will increase the accountability of educators and institutions, while extending individuals; control over their learning and providing greater freedom of individual choice" (p.116).

New Zealand Labour Market

From the mid 1980s, one factor argued to have influenced burgeoning student numbers at tertiary institutions was the declining state of the labour market. This was a result of a global economic slowdown, from which New Zealand emerged substantially worse off than many OECD nations (Eichbaum, 2001). As a result of streamlined and downsized enterprises, due largely to the restructuring of the state service sector and manufacturing industries, about 100 000 jobs were lost between 1987 and 1992 (Tobias, 1999). This coincided with both rapid growth in unemployment rates and significant casualization of the labour force. As unfettered global competition forced organisations to become efficient and responsive to changeable economic conditions, numerically flexible workforces became prevalent through temporary contracts, sub-contracting and part-time working arrangements (Carroll, 1999). This has arguably led to a direct increase in tertiary participation from those already within the workforce, as "weakening job security makes public

accreditation more attractive than company training programmes with no "official certificate" of results of learning" (Otala, 1994, p.13).

Overall, the proportion of the working age population studying, and not in employment or unemployed, rose from 3.9 in 1986 to 5.5 percent in 1999 (Carroll, 1999). One notable upward trend within this was the number of women completing tertiary qualifications, with almost 60 percent of university graduates now being women (NZVCC Graduate Destinations Report, 2002). This is mirrored by and correlated with the concurrent rise in the labour force participation of prime-aged women (aged between 24 – 45), over the last decade (Bururu, Irwin and Melville, 1998). With regard to its implications for tertiary participation, another important labour market trend is the continued high unemployment for young people aged 15 – 24 (Carroll, 1999). In tandem with declining workforce participation rates, this partially reflects the higher retention of senior high school students and the increasing participation of youth in tertiary education. According to Bururu et al (1998), one possible cause of this trend is that the rising demand in OECD countries for individuals to fill skilled service sector jobs rather than manufacturing jobs has required a more adaptable and broadly skilled labour force. In 2002, continued growth in business and financial services and occupational groupings such as managers, professionals and technicians require higher skill levels (Conway and McLoughlin, 2002) and increasingly, in a tight, competitive labour market, obtaining these positions requires a tertiary qualification.

Carnoy (1998) argues the economic transformation of post-industrial countries, facilitated by new technologies and lean production methods, has fundamentally transformed work. "The distinguishing feature of work in the information age is the centrality of knowledge, especially transportable general knowledge that is not specific to a single job or firm. The best jobs are those that require a high level of education..." (Carnoy, 1998, p.124). Over the last 15 years, New Zealand has seen continued growth in service sector employment. From September 1986 to September 2001 this rose by 8 percent to 68 percent, with the number of people employed in the

service sector increasing by 33 percent to 1.234 million (Conway and McLoughlin, 2002). While it may once have been true that education was not part of the New Zealand tradition (Corbett, 1996), massive social and economic change over the last few decades has led to significant changes in the expectations of employers regarding the value of tertiary education (Ministry of Education, 1999).

Employers, increasingly adopting higher-level post-secondary credentials as a screening process for positions, have helped create the heavy emphasis on accreditation (Livingstone, 1998). At times, the employment of higher qualified individuals occurs irrespective of any change in the skills required to perform the job (Green, Ashton, Burchell, Davies and Felstead, 2000). This is one factor explaining the significant burden that has been placed on the formal education system and the graduate labour market by the sheer volume of participants. Within modern society credential inflation, buoyed by graduate oversupply to industry, market driven institutions and governments eager to maintain economic competitiveness, has been a recognised dilemma for some time (Collins, 1979). The proliferation of academic institutions offering degree courses in ever expanding disciplines and modes of tuition has led to the massification of the tertiary education system, in part sustained by individuals continuing to up skill in order to differentiate themselves from the mass of graduates flooding the labour market (Dugdale, 1997; Tobias, 1999; Schuller, 2000).

Trends in tertiary participation: Who, what and how?

WHO IS STUDYING?

In New Zealand, in the 12 years between 1983 and 1995, student enrolments at universities alone almost doubled from 56, 513 to 104, 525 (Corbett, 1996). While the growth in student numbers appeared to slow down in the late 1990s, attendance still grew by 17% from 1997 to 2001. In July 2001, the total number enrolled at New Zealand universities was 125, 547.

Just as significant as the growth in numbers has been the change in composition of the student body. Several noteworthy enrolment patterns have emerged as the role and value of education to society has undergone significant change. In addition to the influence of educational reforms and labour market conditions, there are also changing work aspirations and attitudes amongst both young and older New Zealanders. The significant increases in female participation rates within tertiary education is but one example of this. Egerton (2001) argued that for mature women, "the increased social acceptability (and sometimes economic necessity) of work for married women led many women to retrain for employment through the university system..." (p.136).

The representation of women in tertiary education has also continued to improve with more than half of those currently in tertiary education in New Zealand being female (55.1%). This major trend in the demographic profile of tertiary students is correlated with changes that have occurred in the structure of the labour market. The growth in women's employment rates is explained, in part, by the trend towards participation in tertiary study amongst women, increasing their likelihood of employment through improved labour market positioning. While men traditionally represented the majority of students in tertiary study, this trend has now reversed. Since 1990, more than 70% of the increase in tertiary participation rates has been through women (NZ Tertiary Education Trends and Profiles, 1999).

However, women are not the only group in society responding to the perceived benefits of attaining tertiary qualifications. For example, between 1987 and 1996, the participation of 18 – 24 years olds increased by approximately 43% for males and 87% for females (Ministry of Education). There has been a steady growth in the number of school leavers, aged 18 -24, moving directly from school into tertiary education. In 1981, just 20 percent of students who finished school enrolled in tertiary study, compared with 41 percent of school leavers in 1998 (Ministry of Education, 1999). Positions for school leavers simply do not exist in the numbers they once did, with overseas evidence suggesting that many jobs previously filled by

high school students are now being filled by tertiary graduates unable to secure 'graduate' employment (Gray and Chapman, 1999; Doherty, Viney and Adamson, 1997). Persistently high unemployment amongst 15 –24 year olds also supports the argument that positions for school leavers are in short supply. As McKenzie and Wurzburg (1997) argue, "For young people, the strongest emphasis should be on ensuring that, when they leave initial education and training, they have the skills, knowledge and attitudes that will make them productive and employable workers" (1997, p.2).

While the traditional student group of school leavers aged 18 to 24 was still the majority, students of 25 years of age or more made up almost half of all graduates in 2000 (NZVCC University Graduates Destinations, 2000). According to Egerton (2001), two principal reasons explain the uptake of tertiary study by mature students. First, access to educational programmes as an adult that may not have been accessible or regarded as appropriate in earlier years. Second, through direct participation, there has been a growing awareness of changes to the nature of work and the labour market. This has resulted in a desire to up skill, both as a means of self-development or, more instrumentally, as a way to change careers or improve promotional opportunities. Some mature students have chosen, or been forced through events such as redundancy, to undertake full-time study, often indicating a definite change in career (Egerton, 2001). However, one of the noticeable trends with mature students in particular has been the undertaking of part-time study while remaining in full-time employment.

MODE OF STUDY

Significant societal and economic changes have fuelled these emerging demographic trends amongst New Zealand tertiary students in recent years. Themes such as the global market place, lifelong learning, the changing nature of work and changing career patterns have all had implications for the educational demands of individual participants. Factors include the timing of study, in relation to career development, the mode of study being engaged in and the types of courses being attended. The

last decade has seen a significant increase in the numbers of part-time and extramural students, combining the worlds of education and work.

In New Zealand, the change in labour market job composition towards more flexible working arrangements is associated with the high proportion of part-time students (Gobbi, 1998), relative to other OECD nations. Again, a little of over 30% of the growth in student numbers throughout the 1990's is attributed to women entering part-time study, while the number of males involved in part-time study has remained steady (NZ Tertiary Education Trends and Profiles, 1999). In a New Zealand study examining participation in post-compulsory education by members of the paid labour force, Gobbi (1998) found that part-time workers and those in employment with shorter tenure were most likely to be studying towards a qualification. One explanation for this was the high number of younger workers using part-time employment to support their study towards a recognised qualification. Whether students are increasingly choosing to work regular part-time hours while studying (Curtis and Lucas, 2000) or individuals are choosing to engage in part-time study while primarily working, either part-time or full-time, there is a recognised trend towards the blurring and intermingling of these two life phases (OECD, 2000).

COMBINING STUDY AND WORK

Much is made of the trend towards combining study with work both for young people and those re-entering tertiary study later in life. As with nations such as Canada, USA and Australia, New Zealand is dominated by general education programmes, allowing relatively free movement between study and work. A comparative international study examining initial transitions of young adults from education to work found that combining work and study, either simultaneously or through movement back and forth between the two, was contributing to longer stays in initial education (OECD, 2000). This may reap positive rewards for students by improving their labour market opportunities at the conclusion of study. However, Boxall (1999) argues, "young people who stay at university 'too long for too little',

are actually undermining their careers"(p.4). This suggests that it is better to complete a qualification in minimum time and then gain on-the-job work experience necessary to develop a strong career. Some studies researching employer needs or expectations of university graduates raise the issue of a lack of practical work experience and job skills in graduates leaving initial education (Gush, 1996; Stewart and Knowles, 1998; Woodley and Brennan, 2000; Mason, 2001; Higgins and Dalziel, 2002).

Two major reasons proposed for the increase in young adults combining work with study are financial necessity and a desire to gain work experience (Curtis and Lucas, 2000). Between 1986 and 1996 the proportion of students employed part-time while studying rose from 13.4 percent to 37.2 percent. Also, over the same period, the proportion of full-time students in full-time employment grew from 2.9 percent to 5.7 percent and students combining part-time study with part-time work increased from 7.3 percent to 13.8 percent (Statistics New Zealand, 1996). These statistics demonstrate the trend within New Zealand towards more flexible and less distinct forms of involvement in employment and education.

CHOICE OF STUDY PROGRAMMES

Smith, McKnight and Naylor (2000) found in a UK study that the ease of labour market entry and quality of early career trajectories differed according to subject studied at university. In the face of changing employer needs and expectations, secondary school students are becoming increasingly anxious about the opportunities likely to accompany different degree choices. This desire to maximise labour market potential is further emphasised by the number of students electing to complete double or conjoint degrees, or having completed one degree, supplementing it with additional qualifications (Smith, 2001). However, this needs to be balanced against recent studies of New Zealand employers, that suggest they are placing an emphasis on the possession cross-functional skills and personal characteristics in advance of a particular degree speciality or top academic

achievement (Burchell, Hodges, and Rainsbury, 1999; VUW Career Development and Employment Service, 2000; Smith, 2001).

According to the NZVCC Graduate Destinations Report (2001), the dominant fields of study for graduating students in 2000 were social and behavioural sciences, at 29.3 percent, followed by commerce/business with 26.7 percent. The next highest at 10.6% was humanities, demonstrating the strong participation in these areas over more scientific, mathematical and computer related disciplines. This is an interesting trend given that Burchell, Hodges and Rainsbury (1999), herald technology and science majors as the fast track careers of the next decade.

Graduate Expectations of Employment Outcomes

> *"Knowledge and learning have become commodities, with information being the chief currency through which participants buy, sell and trade in the education domain."(Roberts and Peters, 1998, p.5).*

While such market terminology may be offensive to the academic world, it encapsulates the reasons why education has had so much expectation heaped upon it by students, employers, communities and governments alike. However, before examining the research around the employment related expectations of university graduates, it is important to recognise that not all expectations of education will be economic and career oriented. Reasons for studying are often far more complex and self-actualising, including such agendas as personal growth, changing life roles and readiness for self-initiated learning (Walters, 2000). Several studies relating specifically to mature students identified a variety of motivations and expectations influencing adult participation in tertiary education (Blair, McPake and Munn, 1995; Walters, 2000). However it is generally accepted that a predominant reason many individuals choose to participate in tertiary education is to improve their employment opportunities (Corson, 1988; Cox and Pollock, 1997; Muysken and ter Weel, 2001).

While there appears to be little or no empirical evidence examining the expectations of graduates entering employment in New Zealand, there is a substantial body of international research that has explored this topic. Research into graduate employment and early career expectations have tended to focus on the match, or often mismatch, between student expectations and labour market realities. As Dugdale (1997) stated, "That the graduate labour market has fundamentally changed in the 1990's is clear, what is less well understood is how far graduate expectations have also changed" (p.161). The changed graduate labour market referred to includes trends in factors such as, the rise of non-standard work including temporary and part-time positions (Lowe and Krahn, 2000); the substitution of graduates into previously non-graduate positions (Gush, 1996); the dismantling of fast track graduate trainee programmes (Doherty et al, 1997); and an employer focus on short termism and flexibility rather than job security (Counsell, 1996; Burke, 1998).

Therefore research into graduate expectations in the 1990s has tended to look not only at the particular work aspirations and expected outcomes such as ease of labour market entry, nature of work acquired, use of tertiary qualifications, rates of pay and opportunities for career progression but also the general awareness of graduates as to the changed economic realities of the labour market. In a study of graduate perceptions in the Hong Kong labour market, Lau and Pang (1995) found that graduates' views of what 'career' meant, often included reference to market demand. This suggested an awareness of the importance of the economic, or labour market, environment for graduates pursuing their careers. Purcell and Pitcher (1996) found that graduates in the United Kingdom expected they would need to be flexible in the range of industries and occupations they would seek work in. In a Canadian study, exposure to the realities of the working world was argued by Lowe and Krahn (2000) to 'inject realism' into occupational aspirations. They found that a comparison of students with and without work experience correspondingly shaped their work aspirations, generally by decreasing expectations. In this sense, Martin (2001) argues that extramural students, who are generally older, have an advantage over

traditionally aged graduates, as they are more likely to have better market awareness and personal direction.

With respect to salary expectations, Betts (1996) found the influence of years in education was significant in how accurately students predicted the likely earnings of different classes of occupation. In particular, final year students predicting earnings in their own field of study or interest offered the most accurate predictions, suggesting individuals may form graduate salary expectations based on the acquisition of salary information relevant to their anticipated occupations. In the UK, Purcell and Pitcher (1996) argued that, "In their salary expectations, the majority of students demonstrated a realistic perception of a labour market which is able to select from a large number of new graduates emerging from mass higher education" (p.46).

The New Zealand Vice Chancellor's Committee provides information on average and median Bachelor graduate salaries in the first year following graduation. These are broken down into ten aggregate fields of study and by gender. There is a general trend in the disparity of wages for males and females across all fields of study, with males receiving higher average wages in all fields except for physical and biological sciences. Interestingly, these two fields of study, along with visual and performing arts, have the lowest paid graduates, with highest proportion of graduates earning $30,000 or less. At the top end of graduate incomes, of those employed full-time, 30 percent earned between $30,001 and $35,000 and a further 26 percent were earning more than $40,001. Despite the gender inequities in graduate salaries, 58.4% of this higher paid group were female in 2000.

Labour Market Outcomes

THE EASE OF TRANSITION FROM STUDY TO WORK

Research on life-course transitions from education to work tend to examine the full range of pathways young people take from the end of compulsory education until

they achieve stable entry into the employment system. However, during the 1990s a particular focus on the transitions of university graduates grew in response to the sharp increase in supply of higher educated graduates to industry and tight labour market conditions (Dugdale, 1997). In the Canadian context, Davies et al (1994 cited in Lowe and Krahn, 2000) found that "while university graduates have been more successful than graduates from other post-secondary institutions or high schools in finding good jobs, recent university graduates have encountered more difficulties than did their counterparts in the late 1970s and 1980s" (p.3). In response to such claims, Pullin (1997) argues that difficulties have always existed in the graduate recruitment market and simply became more visible with the expansion in the tertiary education system and the numbers of graduating students.

Whether these are new issues or merely more visible ones, young people across OECD countries in general have consistently been reported as encountering turbulence and difficulties in establishing a stable position in the world of work over the last decade (OECD, 2000; Heinz, 2000). Russell and O'Connell (2001) found that while educational attainment was positively correlated with higher probabilities of employment, national differences in the link between the education system and the labour market influenced the successful transition to employment. While graduate transitions should be examined in relation to the unique national economic, political and social context within which they occur, Ashton and Lowe (1991) argue there is room to develop comparative perspectives.

A New Zealand study in the mid 1990s, examining the relationships between degrees and subsequent career paths, found that in comparison with Australia, New Zealand graduates had more difficulty in finding their first job (Cox and Pollock, 1997). Of the New Zealand graduates, 34.8% experienced difficulty, as compared with 9.8% of Australian graduates. Reasons offered by graduates for the difficulty in finding work included the tight labour market, a lack of work experience and a dearth of jobs in their field of study.

The transition process can include not only different types of work but also movement in and out of the workforce. According to Purcell and Pitcher (1996), the transition from education to work has been further complicated by the tendency of many recent graduates to take time out for travel, enter further study or undertake other activities outside the labour market before seriously contemplating their careers. This process of 'milling and churning' or 'swirling' during entry into the job market can arguably be viewed as positive or negative for both societies and individuals.

> On the one hand it can be argued that early career instability represents costly and unproductive floundering... On the other hand it can be argued that young people receive positive returns from "job shopping", and that funnelling them too quickly into long-term jobs could be counter productive it it prevents them from finding a better match between their skills and interests..." (OECD, 2000, p.78)

In a comprehensive study examining the labour market outcomes of a group of British university graduates, Connor and Pollard (1996) tracked the transition from education to work by asking graduates to report on their career states for six monthly intervals since graduation. They found the number of graduates in permanent employment improved substantially over time. Interestingly, they also reported that a significant majority of graduates experienced very little changeability in their early careers and that while mature graduates appeared to take longer to find work than younger graduates, they showed less turbulence in establishing their careers. In interpreting these findings however, a distinction needs to be drawn between changes in career state, for example unemployed to further study or part-time work and movements within a particular career state, for example continuing to study but embarking on a different course or moving from one full-time position to another. There might be little turbulence in terms of moving in and out of employment or formal study, but 'job change' itself can be very common (Woodley and Brennan, 2000).

Dugdale (1997) argues that in a tight labour market, where employers can be selective, temporary work may be invaluable for allowing graduates to gain valuable

work experience. Lau and Pang (1995) also suggest many graduates may engage in job hopping in their early career formation, trialling 'jobs' in a short-term, exploratory way rather than following firmly established 'career' objectives.

EMPLOYMENT STATUS

For all key stakeholders including government, employers, education providers, local economies, and individuals and their families, assessing the returns of education is important given the substantial investments made. However, as Baldwin and James (2000) argue,

> One is dealing with intangible, non-observable qualities in higher education; the outcomes of university courses are much harder to assess and compare than, say, the holding properties of different brands of glue. They are complex and long-term, and many are hard to measure precisely... infinitely complicated by the diversity of the 'inputs'- the range of students abilities, interests and approaches (p.142).

Beyond the intrinsic nature of many of the direct outcomes of education, these being embodied within the individual, Smith, McKnight and Naylor (2000) argue a more objective measure that quantifies, at least partially, the successful outcomes of graduates, is their 'employability'. Studies researching the destinations of university graduates tend to group graduates into four main categories, namely, in employment; entering further study; seeking work while unemployed and not available for employment (NZVCC Graduate Destinations Report, 1990-2001; Cavaye and Joseph, 1992; Connor and Pollard, 1996; Smith et al, 2000). Smith et al (2000) suggest a perspective emphasising the returns of investment in education tends to view entering employment of further study as positive outcomes and seeking work while unemployed or being unavailable for employment as negative outcomes. While logical, closer examination each of these employment states suggests such an analysis of graduate outcomes may be inadequate.

Not Available for Employment

Despite the delay in returns to the national economy, time spent outside the formal education or employment system may well reap benefits for individuals in terms of personal growth and experiences. A recent survey of over 900 young New Zealanders, most of them tertiary graduates or students, examined why these young people were leaving New Zealand shores. A consistent theme in the responses was that "travel was seen as an important and effective process in growth, and gaining 'life' and 'work' experience, not to mention being fun and often well paid" (Wilson, 2001, p.161). Other interesting reasons reported for individuals embarking on an OE (overseas experience) included difficulties experienced in finding employment without work experience in New Zealand, alongside the greater career opportunities and higher remuneration levels overseas (Wilson, 2001). Inkson, Pringle, Arthur, and Barry (1997) suggest career development achieved through the OE may come from cultural experience rather than from work but time overseas enriched the performance of returning individuals in the companies they eventually worked for. While overseas travel may take people out of the labour market temporarily, it is argued that such experiences can broaden horizons and improve language skills, both useful assets in an increasingly global labour marketplace (OECD, 2000).

While, particularly amongst traditional aged graduates, overseas travel may be the most common reasons taking time out from work or study, other reasons identified as explaining the unavailability of graduates for employment include health or family reasons (Connor and Pollard, 1996). Connor and Pollard (1996), in their UK study, found graduates had predominantly taken time out for travel or leisure activities and that just 11% had taken time out in response to ill health or family commitments.

Unemployment

In their research, Connor and Pollard (1996) also found over half the graduate sample had experienced unemployment at some stage, with 20 percent having been unemployed for more than 6 months in total. Egerton (2001) also reported that

mature graduates, particularly those over 30, had experienced more unemployment in their initial career but over time the rates became comparable with traditional aged graduates. While temporary periods of unemployment may be part of the difficult transition process (Ashton and Lowe, 1991), individuals with higher levels of educational attainment are far less likely to experience prolonged periods of unemployment (Gobbi, 1998; McKenzie and Wurzburg, 1997). Research in the area of underemployment suggests part of the reason this for may be that rather than become unemployed, graduates unable to secure employment in their chosen fields or at their expected credential level will take up non-graduate positions (Aitken, 1994). The potential implications for those with lower level post-secondary education is predictable. "When people accept jobs below their educational level,... they start competing with skilled labour at lower levels, and as a consequence these lower educated will also be forced to accept jobs below their level of skills, or even become unemployed, a process that is generally referred to as bumping down or crowding out." (Borghans & Grip, 2000, p.3).

Further Study

The global trend towards increasing participation in tertiary education extends beyond first degrees with increasing numbers of individuals choosing to complete post-graduate and/or complementary under-graduate qualifications. In New Zealand, the number of students studying post-graduate qualifications increased by 29.5% between 1995 and 1999 (Ministry of Education, 1999). Coffield (1999) argues that as the percentage of citizens achieving graduate status continues to increases, the value of educational credentials declines through the inflationary spiral generated by rising entry requirements. According to Livingstone (1998), "a vicious cycle of more learning for fewer jobs is now well established" (p.6).

Krahn and Lowe (1991), investigating decisions to stay in education, found that the predominant reasons for returning to education were highly career or job related and reflected the perceptions of graduates who believed university degrees could no longer guarantee a good job. Likewise, Dugdale (1997) reported that the lack of

opportunities in the UK job market was encouraging large numbers of graduates to remain in higher education. For post-graduates entering the job market, Connor (1997) found that increasingly they are being recruited alongside first-degree holders, at times, for similar rates of pay.

Employment Experiences

By far the significant majority of graduates leaving university find work, but what remains interesting for researchers is the nature of this work and how demographic variables such as age, gender, work experience and degree specialisation impact on a graduates' individual ability to secure satisfactory employment (Aitken, 1994; Egerton, 2001; Russell and O'Connell, 2001). Also of particular interest in the last two decades, has been the extent and duration of any underemployment graduates experience in the paid workforce in the first few years following graduation.

NATURE OF GRADUATE WORK

Examining the type of work graduates obtain typically includes consideration of factors such as the size, locality and industry of the employing organisation, the relationship between area of study and position obtained, levels of remuneration, job characteristics associated with the position, such as training and development opportunities, and also, the level and permanency of the position. Given the unique characteristics of every national economy and policy regime, studies examining graduate employment outcomes traditionally focus on a particular country or region. Therefore findings from overseas research must be considered as indicative of global trends rather than generalisable to the New Zealand context.

Organisational Size

Belfield (1999), examining graduate perceptions of work in small and medium-sized enterprises (SME) in Britain, reported that in the UK, "graduates are disproportionately employed in large organizations and direct most of their

employment search activities towards such corporations" (p.249). However, from the perspective of graduates wishing to develop new competencies while enjoying independence and flexibility in their work, small enterprises may be an undervalued employment alternative to the large, well-established corporations. An alternative argument is that small organisations may lack the resources to either develop and utilise graduates effectively or pay graduates the remuneration rates larger organisations can afford (Belfield, 1999). However, the growth in the SME market in tandem with the downsizing of many larger organisations has seen a shift in the source of graduate positions and whether through choice or necessity, it is reported that more graduates are taking up work in SME's (Stewart and Knowles, 1999).

There is little New Zealand evidence regarding the number of graduates employed in small as opposed to large organisations. However, the profile of New Zealand businesses is distinctive in the high proportion of small enterprises. Cameron and Massey (1999) define a micro organization as one employing 5 or less individuals and a small organization as one with between 6 and 49 employees. In New Zealand, 99 percent of organisations employ fewer than 50 employees. However, it should be observed that the 1% of organisations with more than 50 employees, employ 45 percent of the New Zealand workforce (Statistics New Zealand, 2001).

Geographic Location

Mobility and migration of graduates following the completion of their qualification is of interest from both a local and national economic viewpoint. While the research concerning graduate mobility has tended to focus on graduates heading overseas, those who remain in their home country may also move to improve their employment opportunities or for other non-career related reasons. One explanation for difficulties in finding employment or satisfaction with employment obtained could be the geographic mobility of graduates. Cox and Pollock (1996) found that reasons given by New Zealand graduates for not leaving an unsatisfactory position were the unavailability of a more suitable position, an unwillingness to move and, for those in rural areas, the restricted opportunities for change. Department of

Labour (2001) found that one of the underlying risks attached to the future of New Zealand's economic opportunities, was the concentration of economic activities in the main centres. "Varying levels of economic growth between regions or locations could mean insufficient levels of opportunities in some regions" (p.10). This may have particular implications for graduates with family or established foundations in a community.

Industry Sector

Overseas studies suggest that university graduates are predominantly gaining employment in service industries, reflecting the shift from agricultural or industrial based economies to service and knowledge centred ones (Lowe and Krahn, 2000; Fleetwood and Shelley, 2000; Batenburg and de Witte, 2001; Connor and Pollard, 1996). This also reflects, according to Fleetwood and Shelley (2000), the areas of occupational growth and job creation and the higher skill levels associated with such positions. Within New Zealand in the mid 1990's, Cox and Pollock (1997) described employment destinations by industry as being dominated by the service sector. Five years after graduating, 21.9 percent were employed in education services, 16.8 percent in business services and 12.9 percent in the public service. Likewise, in the UK Connor and Pollard (1996) found 70 percent of graduates were employed in the service division of their Standard Industry Classification system.

In Connor and Pollard's (1996) study the financial services sector showed proportionately more growth in 'new jobs. Batenburg and de Witte (2001) further argued that strong service and commercially oriented market developments in the Netherlands had meant, "the need for commercially trained employees had grown in general and at high skill levels in particular. The technical and care segments increasingly suffer from this labour market shift and deal with diminishing motivation on the part of young people to specialize in these 'traditional' sectors" (p.89). Batenburg and de Witte (2001) established that, given their gender and level of education, employees with a technical or care specialization had suffered most from credential inflation or underemployment, while those with a commercial

background had fared relatively well. This leads to a discussion of the extent to which graduates have been reported as finding employment relevant to their field of study or qualification.

Relevance of study to work

There are potential problems with attempting to draw associations between some qualifications and labour market outcomes. The relevance of outcomes for graduates studying the traditional professions such as accountancy or veterinary science are more readily recognizable based on the clearly defined parameters of access into these professions via specific qualifications. However, for those with more generic qualifications, the association with particular occupational or industry outcomes maybe less clear-cut. Assessing the ability of the graduates from broader or less specialized qualifications to obtain relevant work also relies on the assumption that graduates wish to enter employment related to their field of study. Purcell and Pitcher (1996) found that in the UK students largely intended to apply for positions relevant to their field of study. Likewise, in the United States, Betts (1996) found that students will be more likely to gather labour market information about their current field of study and closely related fields, given the educational investment already made and the high costs associated with switching to an unrelated field. Batenburg and de Witte (2001) divided the labour market into three segments, commercial, technical and care specialization, arguing that the type of job for which an employee is trained is more an indicator of labour market segmentation than the likely industry or economic sector an individual will enter.

Occupational level

Identifying the occupational groupings of respondents in several studies was found to provide useful information regarding whether graduates had entered graduate level employment (Purcell and Pitcher, 1996; Connor and Pollard, 1996; Cox and Pollock; 1997). In assessing employment destinations according to occupational level, some graduate studies have kept the occupational groupings very broad, often with around 9 major groups In New Zealand, the NZ Classification of Occupations

(1999)[1], divides occupations into 9 major groups. A hierarchy of the expected qualifications or experience associated with these groups is also included. Graduate level positions included the top three levels of the New Zealand Standard Classification of Occupations (NZSCO) including Legislators, Administrators and Managers, Professionals, and Technicians and Associate Professionals. According to the NZSCO occupational hierarchy, technicians and associate professionals generally require just a NZ Certificate or advanced vocational qualification rather than a university degree. However it was anticipated that these occupations may often represent entry level graduate positions, given the limited work experience, particularly traditional graduates, may have in their field of study. This followed a similar approach to classifying graduate and non-graduate positions based on occupational level was adopted in the graduate study of Connor and Pollard (1996). Connor and Pollard found 78% of their graduate respondents were employed in the top three levels of the similarly structured UK Standard Occupational Classification.

Remuneration Levels

Rather than consider remuneration levels in isolation, it is useful to examine the reported relationships between organizational size, industry, field of study and the effects of gender on the level of remuneration secured by different types of graduates. Research in the UK has established that, in general, large firms pay more for observationally equivalent positions, with the wage-gap between large and micro organizations being around 8 percent (Belfield, 1999). Little is known about the comparative situation within the New Zealand economy however, it is anticipated that a similar wage-gap may exist.

Connor and Pollard (1996) found that gender and subject studied at university influenced salary levels. They found that graduates from mathematical sciences, engineering and technology and social sciences were generally higher earners. Similarly, in New Zealand the highest paid fields of study, at least initially, appear to

[1] See Appendix A

be Commerce/Business, Health, Mathematics and Information Science and Technology and Engineering (NZVCC Graduate Destinations Report, 2001).

Age and length of time since graduation were also found to be indicators of wage differentials in the study by Connor and Pollard (1996). However, as their sample was primarily made up of traditional aged graduates making their initial transition into the workforce, they were unable to examine the effect of time in the labour market prior to graduation and the likely effect of significant work experience. Mature graduates face different issues to those entering the labour market for the first time. As Egerton (2001) argues, mature graduates who choose to leave paid employment and study full time may be unable to recoup the debts incurred over their lifetime. This is because a wealth of experience unrelated to their intended career change may not help them to attain greater financial rewards. This has contributed to the increased uptake of part-time degree study while in full-time employment by adults in the 1990s. While for some this may be a drawn out, less costly, way of making a career transition, for others it may be more a case of upskilling to retain or advance their current career opportunities (Egerton, 2001). In these instances, the level of remuneration a mature graduate is reported as earning may be only loosely related to their recent tertiary study and may more accurately reflect prior study and work experience and length of time in the labour market.

UNDEREMPLOYMENT AND CREDENTIALISM

Beyond the difficulties or dissatisfaction experienced with certain aspects of the job lies an even greater problem for increasing numbers of graduates entering the labour market following their tertiary study. Overeducation, under-utilisation, education-jobs gap, occupational mismatch and underemployment are all terms used interchangeably to deal with aspects of the same dilemma. Essentially, it is argued the unprecedented acquisition of formal credentials has not been matched by society's supply of meaningful, fairly compensated jobs, causing wasted ability in the workforce (Batenburg and de Witte, 2001, Livingstone, 1998). According to Asplund and Lilja (2000), the problem of overeducation stems from the significant

investments in education by industrialized nations over the past decades and the inability of market economies to absorb the steady increase in supply of well-educated workers. Discrepancies between supply and demand in any market-driven economy are to be expected. However, in many OECD nations this particular mismatch has proved persistent, creating a "graduatization of many jobs previously filled by non-graduates" (Doherty et al, 1997, p.173).

This phenomenon is not a new idea or concern. Even in the 1960's and 1970's, when terms such as overeducation and underemployment were coined, there was concern that highly educated people who could only secure routine jobs would become bored and reject the established social order (Livingstone, 1998). Throughout the past two decades however, the structural adjustment of world economies to globilisation, increased market competition and the information and communication revolution, has had a dramatic impact on the structure of organizations and the nature of positions within them (Carnoy, 1998). This leads to the important debate over whether higher educated people occupying positions previously held by lower skilled individuals is indeed the result of over-education and credential inflation or of up-grading.

The up-grading perspective argues that occupations today require more skills in order to support productivity growth, crucial to international competitiveness (Borghans and de Grip, 2000). Certainly, the restructuring of production systems with new technologies and the shift of employment to service-producing industries has had implications for the skill composition of many jobs. However, several studies have found that while there has been increase in the average skill level of occupations, this has remained insufficient to accommodate the increasing educational attainment of the workforce (Wolff, 2000; Batenburg and de Witte, 2001).

The cyclical effects of this reported oversupply of educated workers include such outcomes as credentialism. Underemployment, at its simplest, can be defined as a level of education attainment greater than the education requirement of an

occupation (Borghans and de Grip, 2000). However, as more graduates flood the market, employers, able to obtain skills at an educational level previously unsought, raise their qualification requirements when recruiting irrespective of any change in the skills required to perform the job, (Green, Ashton, Burchell, Davies and Felstead, 2000). Therefore, while the job applicant may need the appropriate qualification to compete for and obtain the position, there may be little or no use for the higher level of qualification once employed. This, in turn, promotes longer initial stays in education or returns to education in order to improve chances of finding or retaining employment. "If the job competition occurs due to an increase in the supply of highly educated labour, then others must improve their educational level, simply to defend their current income position. If they don't, others will and they will not find their current job open to them" (Groot and Hoek, 2000).

Two predominant economic theories, human capital theory (wage competition models) and job competition theory dispute the relationship between the labour market's rising education level and wage differentials and unemployment for various educational categories (Groot and Hoek, 2000). Central to the wage competition model is the standard marginal productivity theory of labour demand influencing wage determination (Gray and Chapman, 1999). According to this model, where there is a surplus of degree level applicants, this will put downward pressure on wages for graduate positions and upward pressure on wages for lower skilled positions with fewer applicants due to decreased supply (Groot and Hoek, 2000). If workers obtain the required skills and are willing to accept market wages, more graduate positions will be created. This will occur as long as the value of the marginal product an additional graduate employee produces is greater than the wages they demand. The basic concept of opportunity cost suggests individuals will invest in further education while there remains an advantage in wages realised for educational investment expended (Gray and Chapman, 1999). Business and government voices generally support this position based crudely on the correspondence between economic and educational development and the generally higher earnings of those with further education (Livingstone, 1998).

Alternatively, job competition theory is based on the assumption that wages are linked to jobs rather than people. Consequently, an increase in supply of highly educated workers does not lead to an adjustment of wages, instead high skilled workers compete for a limited number of well-paid jobs and some lose out (Borghans and de Grip, 2000). Successful applicants are selected based on their ability to perform on the job for the lowest training costs. Other important criteria, where training information is not available, include age, education and gender (Russell and O'Connell, 2001). Those unsuccessful are forced to accept positions with lower skill requirements and lower pay. Take for example, the following finding from the United Kingdom Higher Education Statistics Agency, "Competition for established positions in traditional "graduate employment" and the professions is fierce and, as a consequence, the range and variety of jobs into which graduates are moving is becoming increasingly diverse" (Fallows and Steven, 2000, p.75).

Livingstone's Continuum of Under-employment

In attempting to define the ways in which individuals experience or are exposed to underemployment, Livingstone (1998) provides a useful summary of the underemployment continuum. Six distinct dimensions to the education-jobs gap are identified as being the talent use gap; structural unemployment; involuntary reduced employment; the credential gap; the performance gap and subjective underemployment.

The talent use gap, concerned with the wasted talents or underachievement of people based on poorer social and economic origins, is beyond the scope of this research. While it is recognized in New Zealand that some sectors of society are underrepresented in higher education, all of the surveyed participants were degree level graduates, irrespective of their socio-economic or ethnic backgrounds. Likewise, unemployment, discussed previously, is more often a temporary state while transitioning between education and work, rather than a prolonged employment status amongst graduates. The following discussion briefly examines

the definitions and potential relevance for university graduates of the four other dimensions of under-employment identified by Livingstone.

Involuntary reduced employment is a more complex issue, particularly in light of the increasing 'flexible' work practices being introduced by employers seeking cost efficiencies. Part-time jobs, temporary or casual work, flexible working time and self-employment are all on the rise in advanced societies (Carnoy, 1998). For some workers flexible modes of work may be highly compatible with other lifestyle commitments, for example students requiring extra income or work experience while studying (Curtis and Lucas, 2000) or women caring for dependents. However, for others, part-time or temporary full-time work is a second choice alternative in a labour market where full-time jobs are unavailable (Livingstone, 1998).

In examining the position of recent graduates within the New Zealand labour market, however, the two most relevant manifestations of underemployment are the credential gap and the performance gap. The USA and Canada report 20 percent of the employed workforce as in credential underemployment, while the figure for performance underemployment is closer to 40% and on the rise (Batenburg and de Witte, 2001). Credential inflation buoyed by factors such as graduate oversupply to industry, market driven educational institutions and governments eager to maintain economic competitiveness has been a recognised dilemma for sometime now (Collins, 1979). The proliferation of academic institutions offering degree courses in ever expanding disciplines means increased competition for a limited number of positions for graduates entering or re-entering the labour market. With the advent of extramural study, it is also important to include in any competing graduate market those remaining employed in industry while completing their qualifications. Increasing, post-secondary credentials are used as a screening process for jobs (Livingstone, 1998).

Performance underemployment is often closely associated with credential underemployment, but is more concerned with the level of skill and knowledge

required to perform the job once one has acquired it. "Those who talk about their own performance gap usually emphasize how easy their jobs have been to learn and how little challenge work presents to their ability, beyond their ability to tolerate demeaning work" (Livingstone, 1998, p.108).

The final dimension of underemployment identified was subjective underemployment. This may have no bearing on 'official' underemployment statistics but it feeds into any debate examining the wasted capability or potential of the workforce. Dimensions of subjective underemployment frequently identified include perceptions of the fit between one's qualification and the work performed; an individual's ability to use his or her knowledge and skills on the job; and finally, a sense of entitlement to a better job (Livingstone, 1998). This is more closely associated with the prior discussion regarding dissatisfaction with elements of the job and unmet expectations experienced by many graduates (Arnold and Davey MacKenzie, 1992; Holton and Russell, 1999).

The 'Waiting-room effect'

Many factors affect the likelihood of an individual experiencing underemployment in their career. The 'waiting-room effect', highlighted by Batenburg and de Witte (2001), suggests that many graduates are exposed to 'underemployment' based on their relative inexperience in the workforce. Dugdale (1997) also argues that, "what we may be witnessing is graduates starting at lower levels and in different non-graduate functions in order to gain experience before progressing in their careers" (p.157). This suggests that not only is underemployment temporary but that is correlated with age and previous work experience. In response to such an argument, Cox and Pollock (1997) were struck by the high proportion of New Zealand graduates still identifying themselves as in work which was 'not graduate level' five years after graduation. Of the Diploma/Bachelor sample of graduates, 34.5 percent indicated they were not in a graduate position in 1991, five years later, 25.9 percent were still not in a graduate position. In both 1991 and 1996, while approximately half of those experiencing this credential underemployment believed

the job was moving towards a graduate level position, the remainder did not (Cox and Pollock, 1997). Interestingly, despite the equivalent Australian survey being carried out during a time of economic recession, a far higher proportion of graduates were in jobs where a degree was required.

SATISFACTION WITH CAREER DEVELOPMENT

It has been established generally in research examining student expectations that graduates encounter unrealistic or unmet expectations upon entering the workforce (Stewart and Knowles, 1999; Arnold and MacKenzie Davey, 1994; Holton and Russell, 1999). In general, these expectations tend to centre on a strong sense of job entitlement, given their educational investment (Lowe and Krahn, 2000). Two of the most important graduate expectations consistently reported include opportunities for career advancement and provision of interesting and challenging work (Purcell and Pitcher, 1996; Lau and Pang, 1995). Gush (1996) also found that graduates expected to be able to utilise the skills they had learned in their tertiary study.

Holton and Russell (1999) examined the organizational entry and exit patterns of new graduates in their early careers based on the simultaneous effect of several entry constructs and work attitudes. Amongst the entry constructs considered was the influence of graduate perceptions of the anticipated job characteristics. It has been suggested that job characteristics such as perceptions of task identity, significance, autonomy, feedback and skill variety affect employee motivation, satisfaction and turnover (Hackman and Oldman, 1975 cited in Holton and Russell, 1999). Arnold and MacKenzie Davey (1992) pointed to a significant body of research which has established that graduates choose "their first post-graduation jobs and employers on the basis of job characteristics and training and career prospects, more than starting salary, location, prestige or other 'extrinsic' factors" (p.46). Their study consequently found neither expectations of training and development opportunities, nor career prospects were particularly well met.

However, Lau and Pang (1995) argue that the ability to achieve any of these expectations in the early graduate career may be limited, as for many graduates the first job, or jobs, maybe more a case of market (employer) determined allocation than deliberate occupational choice. "They often take a job that happens to come their way rather than one that closely matches their career expectations and goals... to learn skills, pick up knowledge, gain experience and consequently increase their marketability in the labour market" (p.22).

According to Sturges and Guest (2001), both the extent to which graduate expectations are met and the nature of role experiences such as career development on the job, are likely to influence organisational commitment. Other researchers have previously established the link between organizational commitment and turnover intentions (Cohen, 1991 cited in Sturges and Guest, 2001). Cox and Pollock (1997), comparing why graduates leave jobs in New Zealand and Australia, observed that the most common reason Australian graduates left their first job was because of poor prospects and the need to gain broader experience, while New Zealand graduates, who had a low response to this factor, indicated their main reason was to move to a preferred area of profession. Quite apart from the characteristics of the job, however, the second most common reason for leaving in both countries was to travel. This suggests unmet expectations are only one factor amongst several contributing to the high job mobility of graduates in their early careers.

Several overriding themes emerged from the literature of importance to graduates and other investors or interest groups concerned with the returns of education. It is argued that the changed nature of the global economy to a service and knowledge based one requires higher levels of qualified individuals than maybe ever before. However, the large numbers of individuals, with increasingly diverse backgrounds, exiting tertiary study are reported to be placing pressure on labour markets to meet the increasing supply of highly qualified participants. Whether this represents an imbalance of supply and demand, or a temporary consequence of labour market

inexperience, there is a significant body of global research examining the disturbing trends of credential inflation and underemployment. Several studies in the 1990s have examined these issues with particular reference to recent graduates who have experienced difficulty in the process of entering the labour market (Connor and Pollard, 1996; OECD, 2000). In light of these global trends and research findings concerned with well-qualified graduates, there was a need to develop a more comprehensive picture of how graduates within New Zealand fared upon entry into the labour market.

CHAPTER 3: *The Present Study*

The purpose of this research was to develop a more comprehensive understanding of the labour market outcomes experienced by New Zealand graduates in the first few years following graduation. This was argued to be an important area given the substantial investments of both individuals and government. Other stakeholders such as local communities and educational providers also have a vested interest in how graduates fare upon completion of their tertiary education. However, these distinct interest groups have quite different notions of what defines successful outcomes for graduates. Therefore, it was important to establish clearly, the parameters of this study with respect to whose perceptions were being reported.

While the central question in research examining graduate outcomes remains 'whether they do well', Woodley and Brennan (2000) observed that the way this question is defined and measured varies. According to Woodley and Brennan (2000) there are three predominant approaches to research in this area. The first approach has been to question whether outcomes are worth the social and personal investment. Comparative analyses of graduates and non-graduates attempt to gauge the 'rate of return' for both individuals and society. Most OECD countries collect aggregate information examining such trends in earnings and employment. In America, Pryor and Schaffer (1997) used earnings and employment data to help explain the paradox of labour shortages and rising real wages for graduates on the one hand and the apparent surplus of graduates in the labour market leading to high reported levels of underemployment on the other.

Within the New Zealand context, government departments such as the Department of Labour and the Ministry of Education provide reports examining trends in educational attainment and employment outcomes of the New Zealand population. In addition, the New Zealand Vice Chancellors Committee (NZVCC) conducts an

annual Graduate Destinations Report across all New Zealand universities approximately six months after graduation. This has provided extensive aggregate data on the status of graduates at that time. However, very little research has been carried out examining the on-going labour market experiences of university graduates in the first few years following graduation. Given the turbulent nature of early graduate careers (Connor and Pollard, 1996), Holton and Russell (1999) suggest responses gained from graduates following at least one year of graduation may be more stable indicators of later career outcomes.

The second approach has been to examine the satisfaction of employers with graduates entering the labour market, in terms of industry needs and employer expectations. As employers drive the demand for labour, their responsiveness to the graduate labour market and perceptions regarding the employability of graduates is an important consideration. Findings from employer focused studies suggest a heavy emphasis on transferable skills such as commercial awareness and communication skills and often lament the skills gap between industry needs and degree level graduates (Mason, 2001; Woodley and Brennan, 2000; Gush, 1996). It is necessary to recognise, however, the narrow enterprise or industry perspective of employers in their reported expectations of graduates. Mason (2001) argues that the emphasis of employers on shortcomings in graduate quality reflects the impact of recent changes in markets and work organisation. The commercial impetus for seeking experienced technical graduates who will not require extensive training has become more intense in recent years. In a New Zealand study, Higgins and Dalziel (2002) also reported that significantly more employers required previous work experience in a similar job than a particular qualification. Consequently, while of interest to graduates, education institutions, and the state alike, employer centred research addressing successful graduate outcomes tends to be limited by the adoption of a highly instrumental and specific needs based orientation.

Finally, other studies have examined the perceptions and experiences of the graduates themselves regarding their tertiary education and consequent labour

market outcomes. While the emphasis remains on the type and nature of labour market or employment outcomes achieved by graduates following their education, such studies have allowed graduates to report their own perspective on whether these outcomes are satisfactory (Connor and Pollard, 1996; Krahn and Lowe, 1991; Cox and Pollock, 1997). Although different methodological approaches have been adopted in these studies, significant to the richness of data obtained has been the analysis of graduate outcomes over a sustained period of time. The intention is to avoid the previously mentioned changeability or uncertainty of early graduate movements within the labour market following graduation. Research on labour market outcomes for university graduates within New Zealand is very limited. The exception to this was a national study by Cox and Pollock (1997) who adapted an Australian based study, which examined the status of graduates one year after graduation and then five years on. This study provided some useful comparisons of graduate outcomes in the Australian and New Zealand labour markets and provided information on the position of graduates at two distinct points in time. Some of the limitations of this study included the inability to provide insight into the nature of the transition process and the particular difficulties experienced during those first few years of employment.

The crucial perspective identified in the present study is that of the actual participants, the graduates directly involved in managing the transition process. The overriding question for all graduates, employed or otherwise, is whether education has delivered on its promises. In this context, it is not for the researcher, the government, the education system or employers to decide what a successful graduate outcome might be. The question of whether education has delivered is for the graduate respondents to answer. The following chapter discusses the methodological approach adopted in order to develop a better understanding of expectations and employment experiences of New Zealand graduates.

CHAPTER 4: *Methodology*

The aim of this research was to examine the expectations and employment outcomes of graduates in the early years following graduation within the context of the New Zealand education system and labour market. In doing so, seven specific areas likely to influence graduate perceptions of their success within the labour market and satisfaction with their early careers were examined. These include the following seven research questions:

Question 1:

What are the trends in tertiary participation within New Zealand?

Question 2:

What influenced the study choices of these graduates?

Question 3:

What were their employment expectations following completion of their degree and did these alter while they were studying?

Question 4:

What is the nature of the transition process from education to work, in terms of the ease of transition and any turbulence or changeability in their early careers?

Question 5:

What do graduates identify as the main reasons for their labour market experiences other than stable employment?

Question 6:

What are the current employment circumstances of the graduates in stable employment, including the extent and nature of any underemployment?

Question 7:
To what extent are graduates satisfied with their overall study choices and career development?

SAMPLE POPULATION AND SELECTION OF PARTICIPANTS

The population for this study was individuals who had graduated from Massey University with a Bachelor degree between 1998 and 2000 inclusive. It was decided to restrict the population to Massey University graduates for pragmatic reasons such as the availability of graduate contact information and the need to limit the scope of the study given time and financial constraints. Massey University, as the predominant university distance education provider, also offered a unique graduate sample, which was expected to yield some interesting findings given the high level of mature students and alternative studying modes.

Degree level graduates from 1998 to 2000 were selected from across the three Colleges of Science, Social Sciences and Business at Massey University and included both internal and extramural students of all ages. The College of Education was excluded from the study both because of the unique nature of this area of study and the need to limit the survey size. Any degree with less than 100 total graduates over the three years captured within this survey was excluded. Also, initially, all overseas addresses were eliminated due to cost limitations and the intent to focus on New Zealand citizens and the New Zealand labour market rather than overseas graduates. However, a small number of New Zealand citizens, identified as traveling overseas by friends and relatives who wished to respond and for whom email addresses were supplied, were contacted and invited to participate via web access.

The Alumni Office at Massey University agreed to make their database of graduate contact details available for the purposes of this research. This was identified as the most reliable source of current addresses for recent graduates of Massey University, given their constant updating of the database in response to returned mail and graduates informing them of changes of address. However, traditional aged

graduates in particular were recognised as being a highly transient group, especially while establishing their career. Also, the data for the 2000 graduates, at the time the sample was generated, had not yet been formally screened for accuracy and entered into the graduate database by the Alumni Office. Bearing these issues in mind, the decision was made to contact a large sample of the population. There were 737 graduates from 1998, 1233 from 1999, and 1673 from 2000 who matched the initial criteria outlined above. The greater attrition rate for the earlier graduating years reflected, in part, the work of the Alumni Office in maintaining only useable address for previous graduate cohorts. Given the desire to obtain a representative sample across the three years and the particular interest in career outcomes over time, it was decided to contact all of the 737 graduates from 1998 and randomly select similar size samples from the 1999 and 2000 cohorts. 75% of the 1999 graduate cohort was randomly chosen, yielding a sample size of 910 and 50% of the 2000 cohort were randomly sampled, yielding a graduate sample of 840. This produced an initial sample size of 2487 graduates across the three years.

COLLECTION OF DATA AND SURVEY RESPONSE

An initial warm up letter, pre-notifying the prospective subjects that they has been chosen to take part in the graduate survey, was sent to all graduates in the sample in September 2001. This is argued to be an effective way to increase the response rate to mail surveys (Ellis, 1994; Cohen and Manion, 1994; Cooper and Emory, 1995). The reasons for sending the letter in this study were two-fold. Primarily it served to alert potential participants of the purpose and nature of the questionnaire to follow and its relevance to them but it also provided a cost effective means by which to identify wrong addresses or disinterested parties and reduce the cost of production and postage, including return postage, for the larger, more costly questionnaire. Following the preliminary notification and the mail out of the questionnaire in October 2001[1], the sample size was reduced by 288 to 2199 as a result of 'GNA' (Gone, No Address) or 'address unknown' returns. A reminder was sent in December 2001, this time period was chosen as it was anticipated that graduates

[1] See Appendices A & B

who had listed their parents home address as their own while studying, may be returning home for Christmas around this time. When the survey was closed in late January 2002, 629 responses had been received in total, 624 of which contained useable data, providing a response rate of 28.6%. Of the useable responses, there was a fairly even distribution relative to graduating year with 31.6% being received from 1998 graduates, 33.5% from 1999 graduates, and 34.9% from 2000 graduates.

Cooper and Emory (1995) argue that despite the advantages of cost-effectiveness and an increase in confidentiality or anonymity, the major weakness of mail surveys is non-response, however mail surveys with a return of about 30% are often considered satisfactory. With the current study, several factors are likely to have contributed to the relatively low response rate, including the length of the questionnaire (Gill and Johnson, 1991; Cooper and Emory, 1995) and the transient nature of the sample group, in terms of residence. The survey booklet contained 15 pages and 60, predominantly closed, questions. It was anticipated that the length of the questionnaire might negatively impact on completion rates, however, it was decided the potential insights and benefits likely to be realised by the use of a more extensive questionnaire out-weighed any potential non-response bias. In a study examining response rates based on title and the length of the survey, Lund and Gram (1998) found that while the response rate to a postal questionnaire without incentives is influenced by its length, this must be considered in light of the value of the increased information to be obtained. Given the lack of research on this area in New Zealand, this study was partially exploratory in nature, with regard to identifying particular trends or issues in the transition to work and early career development of New Zealand graduates. In order to do so, it was desirable to cover a wide range of factors considered likely to influence the success of this process for graduates.

Sample attrition due to non-response represents a major problem for postal surveys. The concern is the extent to which the respondents resemble or differ systematically from non-respondents and therefore, to what extent the findings are representative of the sample or the population as a whole (Ellis, 1994; Hussey and Hussey, 1997).

Wallace and Mellor (1988, cited in Hussey and Hussey, 1997) suggest three methods for dealing with questionnaire non-response including conducting a comparison of the responses by date of reply, a comparison of the demographic profiles or characteristics of respondents with non-respondents or with the survey population. In this instance, the decision was made to examine the representativeness of the respondent sample against characteristics of the Massey University Bachelor degree graduate population between 1998 and 2000. In particular the known characteristics of the graduate population of interest included gender, age and ethnicity.

Gender

Data provided by the New Zealand Vice Chancellors Committee on University Bachelor or Bachelor with Honours graduates from Massey University reported that from 1998 to 2000 the distribution of graduates by gender was approximately 60% female. There was also growth in numbers of females graduating from 59% in 1998 to 63% by 2000. In the present study the proportion of female respondents to male was similarly distributed with 58% of respondents being female.

Age

As the findings of the research indicate there are some quite significant differences in labour market outcomes based on the age of the graduate, it is important to examine the representativeness of this sample based on age. In this study, the respondents were asked to classify themselves as either traditional aged students, those being 18-24 while studying, or mature students, 25 and over while studying. On this basis, the NZVCC report described 54% of 1998 and 1999 graduates as being traditional aged students and 50% of 2000 graduates being in the 18 - 24 age group. Despite the high proportion of well educated young New Zealanders who choose to travel abroad upon completion of their study (Inkson and Myer, 2002), the distribution of respondents within the current study was slightly skewed towards traditional aged students overall, with 56% describing themselves as such. Further analysis, by graduation year, indicated that respondents from 1999 were most significantly skewed towards traditional aged students with almost 60% fitting this description.

This may reflect, in part, the greater significance and relevance of a study examining early career expectations and outcomes for young graduates who have little prior work experience. Overall, however, there was general agreement between the age distribution of traditional to mature aged students of the Massey University population and those responding to this survey.

Table 4.1. Year of Graduation by Student Age Group

		Traditional Student 18-24		Mature Student 25+		Total
		Count		Count		Count
Graduation Year	1998	106	54.1%	90	45.9%	196
	1999	124	59.3%	85	40.7%	209
	2000	118	54.4%	99	45.6%	217
Total		348	55.9%	274	44.1%	622

Ethnicity

Ethnicity was broken into five categories within the current study, reflecting the categories used by the Ministry of Education in their Tertiary Education Reports (1999). These included New Zealand European, New Zealand Maori, Pacific Island, Asian and Other(s). At Massey University between 1998 and 2000 there was a relatively stable distribution between the different ethnicities with the exception of Maori graduates in 2000. This dropped from roughly 7.5% to 3.8% in 2000. There was also a slight increase in the numbers of Asian students in 1999 and 2000 from 7% to approximately 10%. New Zealand Europeans accounted for the significant majority of Bachelor graduates at Massey University at around 80%. The distribution of the ethnic origins of the survey respondents were similar although while an average of only 2.5% of graduates described themselves as 'other' in the New Zealand Vice Chancellor Committee Report, this figure was somewhat higher within the current survey with an average of 6.5%. Interestingly, despite the very low number of New Zealand Maori graduates from Massey University in 2000, nearly 9% of the respondents in 2000 described themselves as New Zealand Maori.

In addition to these general demographics, there was a further recognised skew in the data towards New Zealand graduates who had predominantly chosen not to travel, or take significant periods of time out in their early career. The focus, in recent years, on the reported brain drain makes this an interesting group of likely non-respondents (Inkson and Myers, 2002). However, as the original questionnaire was sent only to New Zealand addresses, only a minority (7.2%) of the respondent graduates were currently residing overseas.

QUESTIONNAIRE

The main objective of this research, as previously indicated, was to improve our understanding of the expectations and realised experiences of graduates in their transition to work after graduation. In doing so, it was initially identified that a longitudinal study following a cohort of graduates out of the tertiary system and into the labour market would be ideal. However, given time constraints and the methodological complexities such as the rate of participant attrition associated with longitudinal research, it was decided instead to utilise a retrospective survey aimed at several graduate cohorts who had completed their qualification within the past four years. The advantages associated with surveying three distinct graduating years included the ability to compare the initial experiences (first 18 months) of graduates seeking to enter the labour market under different economic conditions and also examine the anticipated positive effect of time in the labour market on the relative success of graduates. This was both in terms of employment status and satisfaction with career development. This approach reflected the sample design of a study conducted at Sussex University in the United Kingdom in the early 1990s (Connor and Pollard, 1996).

Despite some differences in focus regarding the analysis of the data obtained, the questionnaire used to gather data from participants was also adapted from this study for two primary reasons. First, as a well recognised study examining early graduate careers (Woodley and Brennan, 2000; Purcell and Pitcher; 1996) it provided a excellent foundation on which to develop a similar study exploring the

expectations and experiences of a sample of New Zealand graduates. Second, by utilising a similar format and in some instances parallel questions, it provided the additional option of being able to conduct comparative analysis at a future stage. However, despite these advantages, there was a need to adapt the questionnaire to suit the New Zealand context and the unique nature of Massey University, where the sample was based, as a distance education provider.

TYPE, STYLE AND FORMAT OF RELEVANT QUESTIONS

Question 1: What are the trends in tertiary participation within New Zealand?

Based on the evidence from the literature regarding the changing nature of participants entering education and the influence of variables such as age, gender, work experience and degree specialisation on labour market outcomes, the initial sections of the questionnaire sought to develop a graduate profile of these characteristics amongst others. Questions included gender, age, ethnic origin, place of residence before and since studying at Massey University, and highest qualification prior to studying at Massey University. Information was also sought concerning the their student profile. This incorporated aspects such as the type of degree completed, length of completion, mode of study, student age group and average grade over their degree.

As Massey graduates are not informed of their grade point average, or awarded a particular class of degree as in the United Kingdom, the responses to this question were potentially somewhat speculative. However, as the class of degree has been identified as a factor contributing to the success of employment outcomes for graduates in other studies (Dugdale, 1997; Connor and Pollard, 1996) it was useful to attempt to gain some idea of the association between student calibre, in terms of academic achievement, and labour market experiences.

Questions 11 and 12 also asked participants to classify the nature of any work experience they had, both prior to and during their time of study at Massey

University. Those who had been engaged in work during term time while studying were also asked to identify the average number of hours worked per week. Finally, question 9 sought the reasons why graduates had chosen to study at Massey University using a list of alternatives. Respondents were invited to select any options which applied and given the opportunity to provide their own explanations. These descriptors and findings are outlined in Chapter 5 which describes the particular nature of this graduate sample.

Question 2: What influenced the study choices of these graduates?

Question 10 in the questionnaire asked respondents to select all the alternatives that applied from a list regarding why they chose their particular degree course. This question allowed for respondents to indicate reasons other than those listed. Question 57, while situated in the final section of the questionnaire asked respondents to indicate on a five point Likert scale, the extent to which monetary factors such as their student loan or future earning potential influenced their choice of study programme. While part of a set of questions asking students to reflect on their study choices, it was consequently decided that responses to this question were a further indicator of motivations for choosing to study and relevant to this research question.

Question 3: What were their employment expectations following completion of their degree and did these alter while they were studying?

Section three of the questionnaire related to the initial career expectations of the graduate sample. By asking them to indicate whether their career expectations changed while studying at Massey University and, if so, in what way, the intent was to develop a picture of the extent of certainty these graduates had about their career before and during their study. The open-ended nature of the second half of question 16 allowed respondents to provide their own explanations of what may have altered their career expectations while studying.

Questions 17 asked respondents to choose, from a range of options, how many months they had expected their job search to last. These responses were matched against question 38 where respondents were asked to indicate how many months it actually took to find work. Respondents were also asked to indicate the position and industry they expected to find work in and why. Again these were open-ended response formats designed to encourage the participants to explain the rationale behind their early career expectations. Finally, the participants were asked to indicate what starting salary they expected to receive and the minimum salary they were prepared to accept. Despite the potential response effects associated with reporting expectations retrospectively (Ellis, 1994), this section was included in order to examine how realistic the expectations of these graduates were prior to entering the labour market and the extent to which these expectations were met.

Question 4: What is the nature of the transition process from education to work, in terms of the ease of transition and any turbulence or changeability in their early careers?

Section four of the questionnaire sought to gather information regarding the variety and nature of career related experiences the participants had encountered since graduation. Firstly, each graduate cohort was asked to indicate which of seven career states they had been engaged in at six monthly intervals since graduation. These career states included: permanent full time employment; permanent part time employment; fixed term employment, meaning a contract of more than 12 months but less than three years; temporary employment, defined as a job with an expected duration of less than 12 months; further study; not available for employment; and unemployment. These categories were similar to those used in the UK study, although more distinctions were made regarding types of non-routine work such as temporary and part time working arrangements. Connor and Pollard (1996) simply distinguished between permanent employment, whether full or part time and short term employment, being work for a duration of less than 3 months.

Responses were recorded separately for each graduating year due to the differing lengths of time respondents had been in the labour market. Patterns in career

progression were available over three and a half years for most 1998 graduates but only 18 months for 2000 graduates following graduation. Therefore aggregate data could only be analysed over the first 18 months for all graduates, two and a half years for 1999 and 1998 graduates and three and a half years for 1998 graduates. It was expected that this would produce some interesting findings regarding both the nature of the transition from education to employment or otherwise for graduates, any turbulence or changeability through this period and the effect of time on graduate outcomes.

A new variable was computed to examine the number of changes between career states in order to draw some conclusions around the turbulence or changeability encountered by graduates in their early career. Question 36 also asked graduates to indicate how many permanent jobs they had held since graduation. The intention was to examine job change itself, as opposed to changes in career state.

Question 5: What do graduates identify as the main reasons for their labour market experiences other than stable employment?

With the nature of employment experiences being addressed in section five of the questionnaire, the remainder of section four asked respondents to provide more information about where they had engaged in further study, been unavailable for employment, experienced unemployment or entered temporary employment during their time since graduation. In the instances of further study, unavailability and temporary employment the emphasis in the multiple dichotomous questions 26, 27 and 35 was to examine the reasons why these options had been taken. As the least desirable career state, those having experienced unemployment were asked to indicate what type of jobs they were willing to take (Q. 31) and what factors they believed had hindered their job search (Q. 32). Question 32, with an open-ended format, allowed for respondents to answer in their own words. For those in employment, question 36 asked respondents to indicate how many periods (i.e. different jobs) of permanent or fixed term employment they had had since graduation, In addition to examining the changeability between career states, this

question provided information regarding the movement for those who have remained within permanent or fixed term employment since graduation.

Question 6: What are the current employment circumstances of the graduates in stable employment, including the extent and nature of any underemployment?

Section five focused on the work experiences of the graduates who were in permanent or fixed term employment. Question 40 asked respondents to indicate what their job or contractual arrangement was. They were then asked to describe the type of work they did, in terms of occupation and industry sector in questions 42 and 43, and the size of their employing organisation in terms of employee numbers (Q. 44). They were also asked to indicate their annual wage or salary on a scale ranging from less than $20 000 to more than $50 000 (Q. 41). When analysing the findings regarding pay, question 41 presented a problem for two reasons. Firstly, a large number of respondents were earning over $50 000 and while this is an interesting finding in itself, the use of a questionnaire to collect the data meant that the researcher was unable to explore this matter any further. Gardner (1976) highlighted the inflexibility, or inability to probe or seek further explanation as an inherent disadvantage of questionnaires. Secondly, the question required respondents to indicate their current remuneration level rather than their initial rate of pay when entering the workforce following graduation. This meant the responses to this question, which in some cases represented four years in the workforce since graduation, could not be compared directly with the remuneration rates graduates had expected initially as indicated in question 21 of the survey.

Given the considerable debate surrounding what constitutes underemployment and how it should be measured, a number of different questions dealing with aspects of underemployment were asked. This was in addition to examining the more objective outcomes of graduates according to occupational level. The issue of graduate underemployment was explored directly in questions 46, 47 and 51. Question 46 provided a range of statements that might describe a job as 'graduate' employment, for example, 'a degree was a formal entry requirement' or 'the

previous holder was a graduate'. Graduates were asked to select any statements that applied. The graduate status of previous job holders for existing positions or reasons for the creation of new positions were addressed in question 47. Question 51 asked the participants to rate the extent to which they considered themselves to be underemployed on a three-point scale, and then, where appropriate, describe in their own words, the ways they felt under-employed.

Question 7: To what extent are graduates satisfied with their overall study choices and career development?

Finally, section six of the questionnaire sought to elicit the overall satisfaction of graduates with their career development since graduation. On a three-point scale graduates were asked to rate their level of satisfaction with five overriding factors including; pace of career progress, opportunities available, support and advice given to you, use of skills and experience, and overall career development. Reflecting upon their study, graduates were also asked to indicate the extent to which their chosen field of study had contributed to their career. Finally, Question 59 examined, in terms of their career, where they expected to be in a year.

This chapter discussed the sample selection, data collection, and development of the questionnaire, along with the particular items included. The following chapters 5 and 6 will present the results from the study. Chapter 5 describes the respondent characteristics including both their individual descriptors and student profiles. This corresponds to the first research question the sought to examine trends in tertiary participation being exhibited by this graduate sample. Chapter six examines in detail their motivations, expectations and experiences in transitioning from study to work, thus addressing the remaining research questions.

CHAPTER 5: *The Nature of the Sample*

Chapter 5 describes the demographics and student profiles of this New Zealand graduate sample. These results address the first research question of the study which focused on current trends in tertiary participation within New Zealand.

Graduate Demographics

YEAR OF GRADUATION

This study sought information from three consecutive Massey University graduate cohorts between 1998 and 2000. The intention was to survey roughly equivalent numbers from each cohort, with 737 graduates from 1998, 910 from 1999, and 840 graduates from 2000. This resulted in a similar distribution of the survey participants where 197 or 31.6% of the useable responses were from 1998 graduates, 209 or 33.5% were received from 1999 graduates and 218 or 34.9% were from 2000 graduates. The number of useable responses was 622.

AGE

Participants were asked to report both their age at the time of filling in the survey and their Student Age Group while studying. For the comparative purposes of this current study, it is this second classification of age that yields the most useful data. Adopting the New Zealand definition of mature and traditional aged graduates, mature graduates are those 25 years and over at the time of entry into their degree course, while traditional aged students are those between 18 and 24. Overall, 56% were traditional aged graduates, and the remaining 44%, mature aged graduates. A breakdown of student age group by year of graduation showed that while responses from each cohort contained more traditional aged students than mature students, the 1999 cohort had the largest disparity in age representation, where almost 60% of these graduates identified themselves as traditional aged graduates. The following

table shows the breakdown of mature and traditional aged students by year of graduation.

Table 5.1. Mature and Traditional Aged Students by year of graduation

		Student Age Group			
		Traditional Student 18-24		Mature Student 25+	
		Count	Percent	Count	Percent
Graduation Year	1998	106	54.1	90	45.9
	1999	124	59.3	85	40.7
	2000	118	54.4	99	45.6

GENDER

Females made up the majority of the respondents at 58%. A more detailed examination of gender representation by graduating year showed a significantly higher proportion of responses from women in the 2000 cohort at nearly 65%. This imbalance had a notable effect on the overall gender balance amongst the respondents, as both 1998 and 1999 cohorts were comprised of 46% male and 54% female. The gender representation of the respondents however, reflected a similarly skewed proportion of female 2000 graduates contacted in the initial survey sample, 58% as compared with 49% and 52% respectively for the 1998 and 1999 cohorts.

Also, as shown in Table 5.2, 65% of mature students in this sample were women, this being significantly higher than the overall percentage of women in the study. However, amongst traditional aged graduates the proportion of males to females was more even.

Table 5.2. Gender Distribution of sample by Student Age Group.

	Traditional Student 18-24		Mature Student 25+		Total	
	Count	Percent	Count	Percent	Count	Percent
Male	164	47.1%	97	35.4%	261	42.0%
Female	184	52.9%	177	64.6%	361	58.0%

ETHNICITY

The sample was predominantly New Zealand European with 84.5 % of graduates describing themselves as such. New Zealand Maori and Other ethnicities were 5.6% and 6.5% respectively, while those of Asian ethnicity made up 3.1% and just two individuals identified themselves as of Pacific Island ethnicity, representing 0.3% of the respondents. The low response from Asian graduates, in comparison with Massey University population statistics, may have resulted from the decision to contact only graduates with New Zealand addresses. This may have eliminated international Asian students who have represented an increasing percentage of the Massey student population in recent years.

RESIDENCE BEFORE AND AFTER MASSEY UNIVERSITY

Examining the location of the respondents before and after their education is useful to provide some indication of the mobility of graduates. It was anticipated there would be significant movement towards the larger cities as graduates seek employment opportunities but that one moderating variable would be age, where mature graduates already in employment and studying extramurally or with greater ties or family commitments may be less mobile.

Location Before Massey University

As a central North Island university, the majority of respondents (88%) were located in the North Island prior to their tertiary study. The largest proportion of students, 17.6% of respondents, not surprisingly, came from the Manawatu region, home of Massey University's largest campus. Auckland provided the next largest pool of students at 15.4%, followed by Hawkes Bay and Wellington at 12.4% and 11.6%, respectively. Those overseas prior to attending Massey University represented just 1.4% of the sample. Figure 5.1 below highlights not only the distribution of students in terms of location prior to attendance at Massey University but also the changes in graduate locality following graduation.

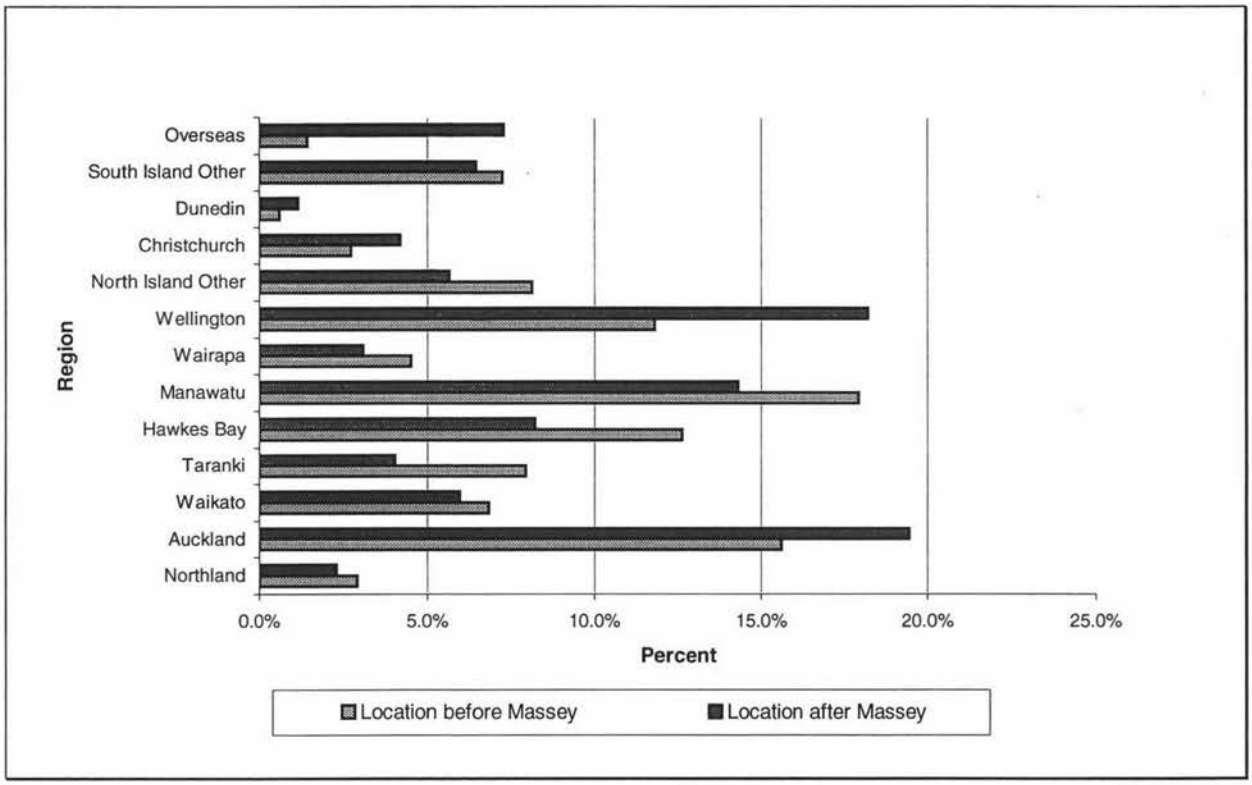

Figure 5.1. Change in Graduate Residence Following Study at Massey University

Location After Massey University

Following graduation there was a very significant drift towards the large urban cities (χ^2 (2, N = 622) = 204.58, p < .000). Given the location of participants prior to their study, there was a noticeable increase in graduates moving to the large urban cities in New Zealand and overseas. The level of graduates identifying themselves as residing overseas is likely to be under-representative because many overseas graduates were either not contactable or chose not to complete the survey at their own expense. An examination of graduate residence by age, depicted in Figures 5.2 and 5.3, showed that while the movement towards large urban cities and overseas was statistically significant for both mature and traditional aged graduates, the significance was far stronger for traditional aged graduates. This may reflect, partly, the high proportion of mature graduates studying extramurally, while combining full or part time work with study.

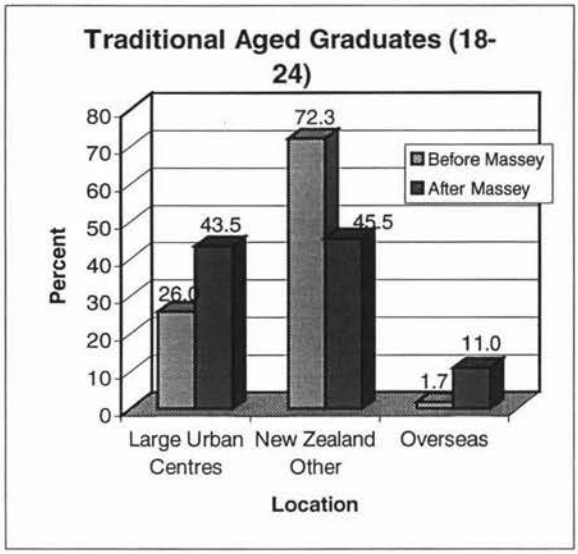

Figure 5.2. Origin and Destination of Traditional Aged Graduates (18-24).

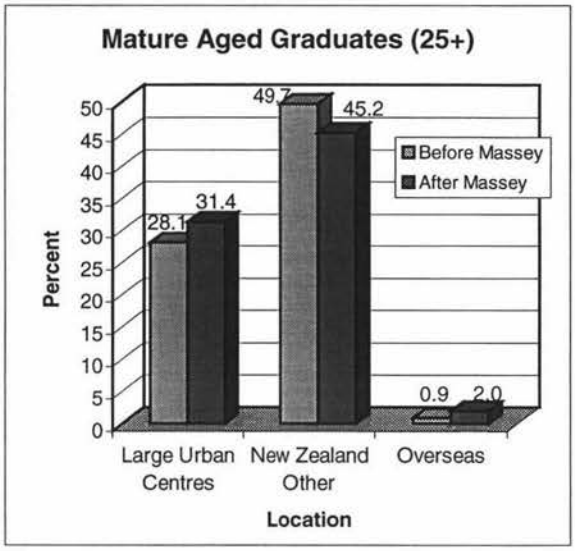

Figure 5.3. Origin and Destination of Mature Aged Graduates (25+).

WORK EXPERIENCE

Only 4.7% of respondents had no form of work experience prior to attending Massey University. This suggests that the significant majority of students studying at tertiary institutions bring with them some form of paid work experience. A closer examination of the types of work experience graduates had prior to attending Massey, shown in Table 5.3, found that just under half of the respondents had no full time work experience. As might be expected, 90% of those graduates were traditional aged students.

Table 5.3. Types of Work Experience Prior to Attending Massey University of Graduates

	Student Age Group		
	Traditional Student 18-24	Mature Student 25+	Total
Voluntary/unpaid work before Massey	29.7%	31.6%	30.6%
Vacation work before Massey	63.8%	25.7%	46.3%
Paid part-time work before Massey	66.9%	40.1%	54.6%
Paid full-time work for less than 1 year before Massey	10.6%	4.8%	7.9%
Paid full-time work for between 1 & 5 years before Massey	6.6%	21.0%	13.2%
Paid full-time work for more than 5 years before Massey	1.6%	63.6%	30.1%

Work Experience While Studying

What is also interesting however, in the current educational environment, is the extent to which graduates are attempting to combine work and study. In recognition of the different circumstances under which traditional and mature aged students come to and complete tertiary study, the work patterns of respondents while studying were also examined by age.

Table 5.4. Work Experience of Graduates while Studying by Student Age Group and Gender

		Traditional Student 18-24			Mature Student 25+		
		Male	Female	Total	Male	Female	Total
Work Experience While Studying	Voluntary/unpaid work during study	18.6%	18.9%	18.7%	20.4%	28.1%	25.3%
	Vacation work	80.8%	70.3%	75.2%	18.3%	14.4%	15.8%
	Part-time paid	51.3%	59.4%	55.6%	22.6%	47.5%	38.3%
	Full-time paid	9.6%	8.6%	9.1%	71.0%	55.6%	61.3%
	Work placement	9.0%	7.4%	8.2%	1.1%	0.6%	0.8%

It was found that 61.3% of mature graduates were employed in full-time work while studying while just 9% of younger students were. However, 55.6% of younger graduates reported themselves as being engaged in part-time work and three out of every four had undertaken vacation work. An examination of the type of work mature students carried out by gender, as shown above in Table 5.4, revealed some interesting disparities when it came to full and part time work (please note totals do not add to 100%, as the question was set in a multiple response format). Mature females students were more likely to be in part-time paid employment than male mature students with the reverse being true concerning full-time paid employment. Again, it was a small minority of respondents who had not carried out some form of paid employment during their degree.

Those who worked during term time were asked to indicate their average hours of work per week. On average respondents worked 24 hours per week while studying. Further analysis of all respondents by mode of study found that overall internal students worked an average of 7.5 hours per week, while extramural and mixed mode students worked, on average, 26 hours per week.

Student Profile

ENTRY QUALIFICATIONS

Almost two thirds of the graduates indicated University Entrance or A Bursary/Scholarship was their highest qualification prior to attending Massey to complete their Bachelor's degree. However, over 20% of respondents reported they had already completed a tertiary qualification at some level prior to the degree in question. It may be somewhat self-evident that this reflected the high number of mature graduate respondents within this study as shown in Table 5.5 below. Overall the extent of prior education bought to their current study differed widely for mature graduates, while the majority of traditional aged students had completed seventh form at high school.

Table 5.5. Highest qualification prior to study at Massey University by Student Age Group

	Student Age Group				Total	
	Traditional Student 18-24		Mature Student 25+			
	Count	Percent	Count	Percent	Count	Percent
None	2	.6%	1	.4%	3	.5%
School Certificate	2	.6%	30	11.0%	32	5.2%
Sixth Form Certificate	24	7.0%	40	14.7%	64	10.4%
University Entrance	224	65.7%	75	27.6%	299	48.8%
A Bursary/Scholarship	75	22.0%	4	1.5%	79	12.9%
Tertiary Non-degree	10	2.9%	87	32.0%	97	15.8%
Bachelor Degree			18	6.6%	18	2.9%
Post-graduate qualfication	1	.3%	6	2.2%	7	1.1%
Foreign Qualification	3	.9%	9	3.3%	12	2.0%
Other			2	.7%	2	.3%

A breakdown by college within which the degree was completed, showed that the highest proportion of respondents (66.3%) entering university with an A Bursary or Scholarship entered the College of Science. This may in part reflect the high entry criteria for specialised degrees such as Veterinary Science and Bachelor of Technology degrees. Conversely, over 85% of individuals who had previously completed a tertiary non-degree level qualification entered the College of Social

Sciences and Humanities and the College of Business. It is likely the relatively low number of mature graduates entering the College of Science in comparison with the other two Colleges explains this effect.

DEGREE STUDY

Looking at aggregate figures, in Table 5.6 below, the sample was relatively evenly divided between the three colleges included in the survey sample. The smallest proportion of respondents came from the College of Social Sciences and Humanities with 27.2% having graduated with a Bachelor of Arts. Those who had received a Bachelor of Business Studies from the College of Business represented 34.8% of the useable responses. The largest group of respondents came from the College of Sciences (38%). As previously mentioned, the College of Science presents a unique situation because of the highly specialised nature of some of the degrees offered through this college. The five science degrees included in the study were the Bachelor of Applied Sciences (12.3%); Bachelor of Science (12.5%); Bachelor of Information Science (2.2%); Bachelor of Technology (6.8%); and Bachelor of Veterinary Science (4.0%).

The 1998 graduate sample contained all updated New Zealand addresses from the Alumni Office for Massey graduates and only 4.8% (N=35) of these belonged to graduates from the College of Social Sciences and Humanities. While the response rate of graduates with a BA degree was higher, relative to the initial sample distribution, this contributed to a lower sample size of graduates from this college overall. In drawing any conclusions concerning the labour market outcomes of 1998 graduates, the lack of representation from BA graduates must be taken into consideration.

Table 5.6. College of Degree by Year of Graduation for Respondents

		Graduation Year			Total
		1998	1999	2000	
College which degree completed	College of Sciences and Humanities	16.8%	29.7%	34.4%	27.2%
	College of Business Studies	45.7%	27.8%	31.7%	34.8%
	College of Science	37.6%	42.6%	33.9%	38.0%

Traditional aged graduates were far more likely to study in the College of Sciences with almost 60% of younger students completing science degrees. Only 12% of mature graduates had completed science degrees while the remainder were evenly divided between the Bachelor of Arts and Bachelor of Business Studies. Overall, the College of Business showed the most even distribution of students by age group, with 53% being mature students and 47% traditional aged students.

FIELD OF STUDY

For the purpose of analysis of graduate employment outcomes, in addition to the College within which the degree was completed, graduates were also grouped according to their field of study as defined by the NZVCC Graduate Destination Report (1999). As shown below in Table 5.7, there were some traditional differences in areas of study by gender. Female graduates dominated health, which at Massey University consists largely of nursing students, as there is no medical school. Social and Behavioural Sciences showed a similar trend. Conversely, graduates from Mathematics and Information Science, Physical Sciences, and Technology and Engineering were more likely to be male. Business accounted for almost 40% of all graduates reflecting both the national trend towards business qualifications and the high numbers of business students at Massey University. Two other categories used in the NZVCC Destination Report were not represented by any of the degrees surveyed in this study. These were Architecture/ Building/ Planning/ Surveying and Visual and Performing Arts, however both of these categories represent only a minority of degree level graduates New Zealand wide (NZVCC Graduate Destinations Report, 1999).

Table 5.7. Field of Study by Gender

	Male	Female	Total
Biological Sciences	18.1%	15.8%	16.8%
Commerce/Business	40.0%	39.2%	39.5%
Health	.4%	5.0%	3.1%
Humanties	7.7%	10.0%	9.0%
Mathematics and Information Science	12.7%	4.2%	7.7%
Physical Sciences	4.2%	1.4%	2.6%
Social and Behavioural Sciences	8.8%	18.9%	14.7%
Technology and Engineering	8.1%	5.6%	6.6%

AVERAGE GRADE

The Massey University grading system distinguishes between First class passes (A+ to A-), Second Class passes (B+ to B-) and a Pass (C+ or C), however this is not formally reported to graduates, as New Zealand first degrees do not contain eligibility for honours. Therefore, while potentially relevant to employment outcomes and therefore included, the average grade reported by graduates was their own estimate and open to bias. The majority of respondents indicated they had achieved Second Class Passes on average. As shown in Table 5.8, mature graduates were slightly more likely to obtain a First Class Pass than traditional graduates and this was found to be a significant difference (χ^2 (2, N = 622) = 7.692, p < .021). There was no significant difference in grades based on the college graduates had studied in.

Table 5.8. Class of Average Grade by Student Age Group

	Student Age Group	
	Traditional Student 18-24	Mature Student 25+
First Class Pass	17.0%	25.9%
Second Class Pass	69.0%	60.2%
Pass	14.1%	13.9%

MODE OF STUDY

As would be expected there was high correlation between the full-time or part-time status of graduates while studying and their mode of study. Just over half of the respondents were internal students, 32% were extramural students and 15.6% described themselves as mixed mode. There were also strong associations with first, the age group of graduates and their mode of study (see Table 5.9 below) and second, their participation in full time paid work while studying. Almost 70% of extramural students suggesting they had worked full time while studying. Overall, however, the percentage of graduates working full time while studying sat at just under 30%.

Table 5.9. Mode of Study by Student Age Group

		Student Age Group			
		Traditional Student 18-24		Mature Student 25+	
Mode of Study	Internal Student	292	84.1%	32	11.8%
	Extramural Student	9	2.6%	189	69.5%
	Mixed Mode	46	13.3%	51	18.8%

Length of Study Duration

In relation to the effects of combining work and study, graduates were also asked to report how long their degree had taken to complete. While one respondent had taken a lengthy 33 years to complete his degree, overall 60% competed their degree within 4 years and three quarters of graduates within 6 years. Internal students took an average of just under four years to complete their degrees with a median length of 3 years, mixed mode students had a median of 4 years and extramural graduates 7.5 years.

CHOICE OF INSTITUTION

Question 9 of the survey asked graduates to indicate what, from a range of options, had influenced their decision to complete their tertiary study at Massey University. Overall, the most common reasons for choosing to study at Massey were the courses

offered, 56% suggested this and the location of Massey University (51%). The opportunity to study extramurally was an important consideration for almost 40% of respondents and just over 20% suggested Massey University's reputation had contributed to their choice of tertiary institution.

An examination of these responses by age showed significant differences for four of the alternatives, these being location, extramural offerings, available subjects and positive attitude towards mature students. Figure 5.4 shows that extramural offerings were by far the predominant reason mature aged students chose Massey University. While 81% of mature students selected this option, the next highest response to any other category was only 38%. Traditional aged students were most likely to cite courses offered or location as influential in their decision to study at Massey University.

When choice of institution was analysed by degree graduates had studied, two factors showed strong trends. Graduates who had studied science degrees, particular the Bachelor of Applied Science, Bachelor of Technology or Bachelor of Veterinary Science were more likely to study at Massey because of the specific degrees offered with four out of five graduates responding to this option. Those for whom reputation was an influencing factor, were also more likely to be have completed a science degree.

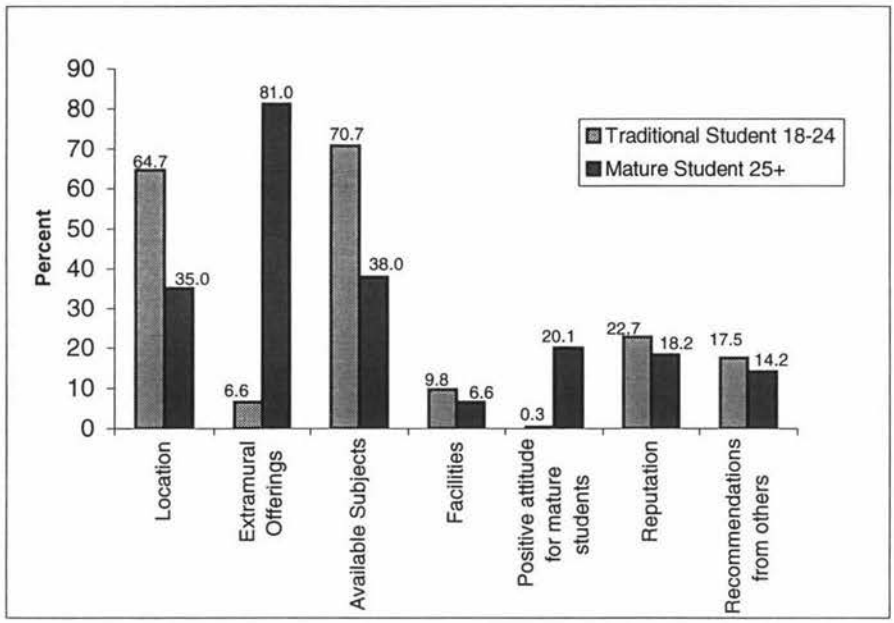

Figure 5.4. Reasons for choosing to study at Massey University by Student Age Group

Overall, analysis of the characteristics of the sample presented in this chapter, emphasised the different set of conditions operating for traditional and mature aged students while studying. Student age group was strongly associated with other variables such as mode of study, extent of work experience, and mobility following graduation. Whether age and other differences amongst the graduates impact on labour market expectations and experiences is explored in the following chapter. Chapter 6 presents findings related to the expectations, experiences and satisfaction of the graduates. Potential differences in response are investigated according to the demographic variables outlined within this chapter.

CHAPTER 6: *Results*

Factors influencing study choices

The second research question sought to examine the factors influencing the educational choices of the graduates. Analysis of the survey questions related to these issues resulted in the following findings.

CHOICE OF DEGREE

Question 10 asked graduates to select any of the alternatives below for choosing their particular degree course and also provided them with the opportunity to offer alternative explanations for their choice.

Table 6.1. Graduate Response Rates to reasons for Choice of Degree

Reasons for choice of degree	Interested in or good at the subject	82.9 %
	To try something different	10.0 %
	Job placement in degree	1.3 %
	Thought it would provide job opportunities	50.2 %
	Other reasons	15.1 %

As shown above in Table 6.1, the most popular reason for choice of degree programme was that respondents were interested in or good at the subject. Half of the respondents had also chosen their degree on the expectation it would provide job opportunities. While only 10% of respondents indicated they had chosen their course 'to try something different', mature graduates were three times more likely that traditional aged graduates to identify this as a reason. In addition, 15 % of respondents offered 'other reasons' for choosing their degree programme.

A more detailed examination of respondents who had chosen their course of study out of interest found that while there was no significant difference in responses based on gender, there was a significant difference based on student age group (χ^2

(1, N = 622) = 22.96, p < .000). Almost 90% of younger students had selected this as a reason for their choice of study programme compared with a lower 75% of mature students.

Of the 50% of graduates who indicated a contributing factor to their course of study was the potential for job opportunities, there was no significant difference between student age groups, gender or mode of study. However, an analysis of the reasons for choice of degree based on the degree studied yielded interesting results. As shown in Figure 6.1, individuals who had chosen their degree based on job opportunities were most likely to study a Bachelor of Business Studies, Bachelor of Information Science or a Bachelor of Technology, following these, the next highest was the Bachelor of Applied Science. Those with a Bachelor of Science degree had the lowest response to this influencing factor at 28%. This was found to be a significant difference (χ^2 (2, N = 622) = 23.60, p < .01).

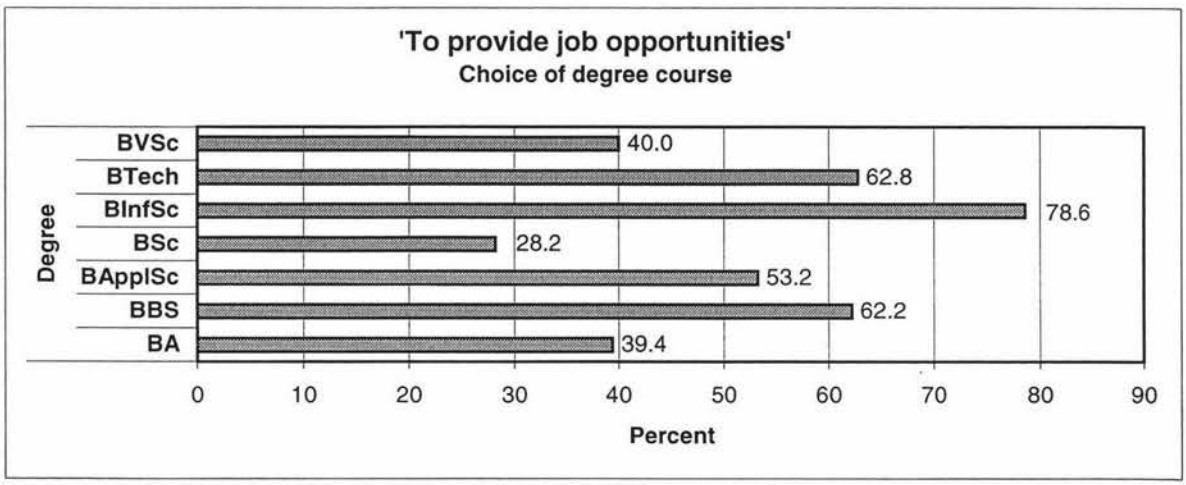

Figure 6.1. Responses by degree studied for graduates selecting their degree on the likelihood of job opportunities.

INFLUENCE OF MONETARY FACTORS

Graduates were also asked to indicate on a 5-point scale with 1 being 'very unimportant' and 5 being 'very important', how significant monetary factors such as their student loan or future earning potential were to their choice of study

programme. The overall mean score of 2.68 suggested graduates considered monetary factors to be relatively unimportant in the choice of degree programme. However, further analysis showed there were statistically differences to the consideration given to monetary factors based on degree studied. Analysis using the non-parametric Kruskal-Wallis test established the relationship between the degree studied and the importance of monetary factors was significant beyond the 1% level (χ^2 (5, N = 579) = 39.68, $p < .01$). Graduates who had taken a Bachelor of Information Science or Bachelor of Technology were most likely to consider monetary factors as important when selecting their degree with mean scores of 3.57 and 3.50 respectively and those completing a Bachelor of Arts least likely with a mean score of 2.31. When examined in relation to student age group, this remained significant for both mature and traditional aged students.

Employment Expectations

What the employment expectations of graduates had been prior to completion of their bachelor degree and whether these had changed while studying, was the focus of the third research question. Given that mature and traditional graduates often enter tertiary study from very different life stages, mature graduates generally having extensive life and/or work experience, it was decided to analyze the employment expectations of these two student groups separately.

TRADITIONAL GRADUATES

Change in Career Expectations While Studying

The first question concerning expectations asked graduates whether their career expectations had changed while they were studying and if so, how. Almost half of the traditional students (46%) suggested their career expectations had changed while they were studying. Traditional graduates who had completed a BA or a BSc were most likely to have changed their career expectations during their tertiary study.

Reasons offered for the change in career expectations were sought through an open-ended question format and these responses were coded for the purpose of statistical analysis. The most consistent reasons for the change in expectations included a downward adjustment of job opportunities following graduation or limited opportunities in the area of study. These issues appeared to be of concern for both traditional and mature aged graduates. Some respondents suggested they had either lost interest in their field of study or gained interest in a different field of study during their degree and changed their career focus accordingly. These were the most common responses for traditional aged students. Positive changes in career expectations were predominantly due to the individuals' greater awareness of job opportunities in their area of study or enhanced confidence in their skills, employability or value to a current employer.

Job Search Process

For traditional graduates 80% believed their job search would take less than 3 months and at the other extreme just 2.6% believed it would take longer than 9 months to find work. Overall, it was a small minority of graduates who had anticipated it would take any longer than six months to find work. Graduates were also asked to indicate how many positions they expected to apply for in order to secure a job. There was no significant difference between traditional aged graduates when examined by the degree studied, gender or graduation year of the respondents.

There were some respondents who chose not to respond to these questions or in some instances the section of the questionnaire regarding employment expectations at all. However, this was particularly prevalent with mature students, as there was a 95% response rate from traditional aged students. Two primary explanations for this were identified as being either, that graduates were already in employment while studying that they intended to remain in or were not intending to enter employment at the conclusion of their study.

Expected Occupational Level

As outlined in Table 6.2, an analysis of expectations of occupational level[1] by degree studied produced some interesting results. Those having studied a Bachelor of Arts were fairly positive about their employment expectations with 55% expecting to obtain professional level jobs and a further 23% anticipating technician or associate professional roles. The reverse was true for those with a Bachelor of Business Studies who tended to have slightly lower expectations of their initial employment outcomes by occupational level. Just over half of them believed they would obtain associate professional or technician roles, with 34% expecting to obtain professional positions.

However, overall slightly fewer BBS graduates expected to enter traditionally non-graduate positions than BA graduates. Those with a Bachelor of Science were least likely to expect to be employed in a professional or management role, while those with a Bachelor of Applied Science (BApplSc) showed the highest proportion of graduates expecting to fulfil non-graduate roles (32.8%). However, this result for BApplSc graduates is partially explained by the occupational classification system, which groups all agriculture and fishery workers together regardless of status or occupational level because of the unique nature of, in particular, the farming industry.

Table 6.2. Graduateness of the position expected by degree for Traditional Graduates

	Degree						
	BA	BBS	BApplSc	BSc	BInfSc	BTech	BVSc
Legislators, Administrators and Professionals	54.8%	34.1%	44.8%	26.1%	60.0%	62.5%	95.2%
Technicians and Associate Professionals	22.6%	51.8%	22.4%	67.4%	30.0%	35.0%	4.8%
Clerks, Service and Sales Workers, and Others	22.6%	14.1%	32.8%	6.5%	10.0%	2.5%	
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[1] See Appendix C for New Zealand Standard Classification of Occupations 1999.

Expectations regarding remuneration

While 38 respondents or 10% of traditional aged graduates chose not to respond to this question, of the remainder who did, the mean remuneration level expected by traditional aged graduates for their first position following graduation was $30 968. T-test analysis of starting salary expectations by gender established no significant difference in expectations. Using the Kruskal Wallis test, a significant difference in starting salary expectations of traditional aged graduates was found dependant on the type of degree studied (χ^2 (6, N = 310) = 43.92, p < .000). BA graduates had higher initial salary expectations than BBS graduates, and while BSc graduates reported the lowest expectations, those who had completed BTech, BInfSc and BVSc degrees reported the highest expectations overall.

MATURE GRADUATES

Change in Career Expectations While Studying

As with the traditional graduates, almost half of the mature students (46%) suggested their career expectations had changed while they were studying. While explanations for this varied as with traditional graduates, mature graduates were more likely to have experienced a positive change in career expectations with enhanced confidence in current value or future employability being the most common explanation for their change in aspirations (12.4%). Of the responses mentioning improved confidence or self-worth, almost 90% were from mature students. The next two most popular explanations were that the graduates gained a greater awareness of job opportunities (5.8%) or experienced a reality check and downward adjustment of employment expectations (6.2%).

In both age groups however, over 50 % of respondents indicated there had been no change in career expectations, suggesting that career direction may have been decided prior to attending university and remained firm throughout their tertiary study.

Job Search Process

Before reporting the expectations of mature graduates concerning the job search process, it is important to address the high non-response rate to these questions. Close to 40% of mature graduates chose not to respond to questions regarding the length of the job search or how many positions they expected to apply for. Analysis of these missing responses found three quarters of them were in full time paid work while studying, suggesting these individuals were in positions or organisations they intended to remain in following the completion of their study.

Mature graduates who did respond to the question regarding how long they expected their job search to take were less optimistic than traditional aged graduates. This was found to be a significant difference (χ^2 (4, N = 496) = 28.51, $p < .01$). The majority (65.7%) still believed it would take less than 3 months to find work but 19.3% expected it to take longer than 6 months to find work, with 13.3% believing it would take longer than nine months. An examination of the age of mature graduates as an explanatory factor was significant at the $p < 0.05$ level, (F(4, 158) = 2.70). Post-hoc analysis using the LSD test found a significant difference in the ages of mature graduates who believed the job search would take between 1 and 3 months and those who believed it would take longer than 9 months to find work, with the later being older graduates.

Expected Occupational Level

Again, as with the previous questions, there was a high non-response to this question of 36%. However, as shown in Table 6.3 below, mature graduates who did respond had significantly higher expectations of the occupational level at which they would enter, re-enter or progress to within the labour market (χ^2 (2, N = 467) = 15.83, $p < .01$). Beyond this, when responses from mature graduates were examined by age, gender and or degree studied no significant relationships were found.

Table 6.3. Occupational level expected by Student Age Group

	Student Age Group	
	Traditional Student 18-24	Mature Student 25+
Legislators, Administrators and Managers	6.5%	19.9%
Professionals	39.9%	45.5%
Technicians and Associate Professionals	38.8%	25.0%
Clerks	4.8%	4.5%
Service and Sale Workers	3.4%	4.0%
Other	6.5%	1.1%

Expectations regarding remuneration

The average level of remuneration that mature graduates expected to receive was $39 051. As might be expected, this was substantially higher than the average for traditional aged graduates ($30 968). However, further analysis revealed a significant difference between the expectations of mature graduates in full time employment while studying and those who were not. Those in fulltime paid work had an average expectation of $46 000, while those not in fulltime work expected an average pay rate of approximately $32 800. This was found to be very strongly significant at the 1% level using an independent samples t-test.

Ease of transition and career changeability

This section of results corresponds to research question four which asked about the nature of the transition process from education to work, in terms of both the ease of transition and any turbulence or changeability in the early careers.

EASE OF ENTRY

Given mature graduates had less optimistic expectations of how long it would take to find work, the actual length of time graduates took to find work was compared for mature and traditional aged graduates. While 80% of traditional graduates had

anticipated a job search of less than 3 months, this was realised by 69% as shown in Table 6.4 below. Using the Wilcoxon Signed Ranks test, the length of the job search for graduates was compared to their stated expectations. This showed that a significant proportion of traditional aged graduates had taken longer to find work than they had expected $T = (z = -5.44, p < .01)$. The same test showed no significant difference in the expectations and experiences of mature graduates, whether they were in full time paid employment while studying or not. Overall, 70% of mature graduates had taken less than 3 months to find work.

Table 6.4. Length of job search by student age group[2]

		Student Age Group		
		Traditional Student 18-24	Mature Student 25+	Total
Length of Job Search	less than 1 month	17.0%	46.7%	30.1%
	1 -3 months	52.3%	23.4%	39.5%
	3 - 6 months	12.6%	5.8%	9.6%
	6 - 9 months	1.4%	1.1%	1.3%
	more than 9 months	5.7%	1.8%	4.0%
	not applicable	10.9%	21.2%	15.4%

CAREER PROGRESSION

Section four of the questionnaire asked graduates to indicate what their labour market status had been at six monthly intervals since graduation. The pathways of graduates to their current status were examined with a particular emphasis on the way the transition process differed for different groups of students. At each time interval, respondents were asked to identify which career state[3] they had been in at the time.

The first time interval at which respondents were asked to indicate their career state was 'at graduation'. However, it needs to be borne in mind that most graduates had completed their study, on average, six months earlier. For a minority of graduates the time between completion of their study and graduation was even longer

[2] Not applicable percentages applied to those graduates who had not entered employment since graduation
[3] See Appendix B - Graduate Questionnaire (contains labels and definitions of the 7 career states).

meaning they had had extra time in the labour market prior to graduation. Also, minority of graduates had a gap of three months or less between completion of their study and graduation. This accounted for 5% of 1999 and 2000 graduates and 11% of 1998 graduates. This meant that the majority of graduates had already been seeking or available for employment for some time prior to their graduation.

Career Status At Graduation

Overall, 51% of the respondents reported they were in full time permanent employment when they graduated, with a further 11.8% in either part-time permanent employment or a fixed term position for more than one year. While the two latter alternatives may not have been the first employment option for all of the graduates in such positions, it still represented relatively stable employment. Further study accounted for the next highest group following permanent employment with 17% of graduates having returned to study. Graduates who were in less stable temporary employment, this being employment expected to last less than 12 months accounted for 8%, while 7% described themselves as unemployed, not employed but seeking work. The final 5% of respondents suggested they were unavailable for employment at graduation. These overall figures, however, hide some significant variations based on independent variables such as the student age group, employment status while studying, and the degree graduates had graduated with.

Table 6.5. Main Activity At Graduation by Student Age Group

	Student Age Group				Total	
	Traditional Student 18-24		Mature Student 25+			
	Count		Count		Count	
fulltime permanent employment	159	46.0%	154	57.7%	313	51.1%
parttime permanent employment	13	3.8%	34	12.7%	47	7.7%
fixed-term employment	16	4.6%	9	3.4%	25	4.1%
temporary employment	36	10.4%	14	5.2%	50	8.2%
further study	78	22.5%	26	9.7%	104	17.0%
not available for employment	13	3.8%	17	6.4%	30	4.9%
unemployed	31	9.0%	13	4.9%	44	7.2%

Table 6.5 above highlights the areas of divergence for traditional aged students and mature students, showing that while 57.7% of all mature graduates were in full time employment, only 46% of traditional graduates were similarly employed. Far more mature graduates were in part-time employment than traditional graduates, while higher proportions of traditional aged graduates had opted to take up temporary positions or enter further education. Unemployment was also more significant for traditional aged graduates at graduation with 9% still seeking work compared to 5% of mature graduates.

However, one factor likely to be influencing these trends was a high proportion of mature graduates in particular who had remained in full time employment while studying and were therefore already employed and not seeking work following the completion of their degree. A significant three-way interaction was found between student age group of graduates, whether they were in full time employment while studying, and their labour market status at graduation using a hierarchical log linear equation. This justified the decision to control for this variable when analysing career outcomes. Consequently, the same comparison between student age groups was made including only those who were not in full time work while studying. This represented 92% of traditional graduates and 43% of mature graduates. Table 6.6 below shows the change in distribution of labour market status for graduates when those in full time employment during their study were removed.

Table 6.6. Main Activity At Graduation (Those NOT employed fulltime while studying)

	Student Age Group			
	Traditional Student 18-24		Mature Student 25+	
		Count		Count
fulltime permanent employment	45.7%	145	28.4%	33
parttime permanent employment	3.5%	11	19.0%	22
fixed-term employment	4.7%	15	6.9%	8
temporary employment	10.4%	33	8.6%	10
further study	22.7%	72	16.4%	19
not available for employment	3.5%	11	11.2%	13
unemployed	9.5%	30	9.5%	11
Total	100.0%	317	100.0%	116

Most interesting to note is the substantially lower proportion of mature graduates who had entered full time employment at graduation. Despite this, when graduates in stable employment (permanent full or part time work and those of fixed term contracts) were combined, the numbers for both mature and traditional graduates were similar, 54.3% and 53.9% respectively. The explanation for this appears to be the high proportion of mature graduates choosing to enter part-time employment for whatever reason. Also interesting however, was that higher proportions of mature graduates were both in less stable temporary employment and unemployment when those already in employment were removed, with equivalent percentages of both age groups being unemployed at graduation.

Relationships were also found between other variables such as gender and degree studied and the labour market status of respondents at graduation. Gender to be significant (χ^2 (6, N = 615) = 15.02, $p < .05$), with the strongest variations occurring between those in part-time employment and temporary employment. Females were more likely to be in both of these career states than males. A similar analysis of labour market status in relation to the college graduates studied in was strongly significant for all respondents (χ^2 (12, N = 615) = 55.45, $p < .01$) and this remained significant when those in full time employment were controlled for (χ^2 (12, N = 435) = 57.22, $p < .01$).

An examination of the various career states showed business graduates were more likely to be in full time employment than graduates from either of the other colleges and those in part–time employment were most likely to be BA graduates. Those entering further study also showed variations with College of Business graduates least likely to have entered further study and graduates from the College of Science showing the highest propensity towards further education. The relationship between the college of degree and labour market status at graduation remained significant at the 0.05 level for both groups when the same test was run while controlling for the student age group of graduates.

Finally, Table 6.7 shows a comparison by graduating year, which found that 1998 graduates had both the highest proportion of graduates in full time permanent employment at graduation (54.5%) and the highest proportion in unemployment (8.9%). The 1999 cohort had slightly more graduates in temporary employment than either of the other graduating years, with almost 10% indicating they were in temporary employment. The overall picture however was that outcomes for graduates appeared to be relatively consistent irrespective of their graduating year.

Table 6.7. Main Activity at Graduation by Graduating Year.

	Graduation Year			
	1998	1999	2000	All
fulltime permanent employment	54.7%	49.3%	49.5%	51.1%
parttime permanent employment	7.3%	6.3%	9.3%	7.6%
fixed-term employment	3.1%	4.3%	4.6%	4.1%
temporary employment	6.8%	9.7%	7.9%	8.1%
further study	17.7%	17.4%	16.2%	17.1%
not available for employment	1.6%	6.8%	6.0%	4.9%
unemployed	8.9%	6.3%	6.5%	7.2%

Career Status Six Months After Graduation

One year after most graduates had completed their studies, or six months after their graduation ceremony, the circumstances of all graduate cohorts were improved. In general this meant fewer graduates in unemployment or temporary and part-time work and more graduates entering permanent full time work. Notable declines by graduating year, shown below in Table 6.8, were the drop in the percentage of 1998 graduates in unemployment from 8.9% to 3.1%. Also, while at graduation 6.8% of 1999 graduates had been unavailable for employment, this had showed substantial decline six months later to just 2.9%.

Overall, 58.9% of graduates were in full time permanent employment six months after graduation, with numbers in all other career states declining. Unemployment, followed by temporary employment showed the largest downward movements. This was particularly marked amongst traditional aged graduates who dropped

from 9% to 3.5% unemployment while mature graduates moved from just 4.9% to 3.8% overall. Most graduates who had been in further study at graduation were still studying six months later, this would be expected given that many courses graduates may have entered would run for at least one year.

Table 6.8. Main Activity 6 Months Later by Graduating Year

	Graduation Year			
	1998	1999	2000	All
fulltime permanent employment	63.0%	55.8%	58.2%	58.9%
parttime permanent employment	6.8%	6.8%	7.5%	7.0%
fixed-term employment	3.6%	3.9%	4.2%	3.9%
temporary employment	4.7%	9.2%	4.7%	6.2%
further study	16.1%	17.5%	14.6%	16.0%
not available for employment	2.6%	2.9%	7.0%	4.3%
unemployed	3.1%	3.9%	3.8%	3.6%

Career Status One Year After Graduation

The most significant change one year after graduation was the drop in those in further study. Overall, this fell from 16% to 11% but a breakdown by year of graduation showed even stronger trends in this area for 1998 and 2000 graduates. The only other area to decline was those in part-time employment, this was mainly attributable to the continued decline in the number of traditional aged graduates remaining in part-time employment with only 1.4% of younger graduates being in part-time employment one year after graduation compared with 11.4% of mature graduates. There had also been a noticeable decline in the number of traditional aged graduates in temporary employment, while the number of mature graduates in temporary employment had remained steady. Those in full time employment had continued to rise with 65.5% of all graduates now employed in permanent full time work. One year after graduation, the group showing the highest level of unemployment were mature graduates who had not been in full time employment while studying. This group had 6% unemployment compared with 3.3% unemployment overall.

Women were still more likely to be in part-time employment or unavailable for employment than men and while proportions of graduates in full time work were high for both males and females, men were more likely to be in full time permanent employment than women. Using chi-squared analysis, gender remained a significant variable at the 1% level for describing the outcomes of graduates one year after graduation.

Table 6.9. Main Activity One Year On by College of Degree

	College within which degree completed					
	College of Social Sciences and Humanities		College of Business		College of Science	
		Count		Count		Count
fulltime permanent employment	50.0%	82	76.4%	162	66.4%	156
parttime permanent employment	12.2%	20	5.2%	11	1.7%	4
fixed-term employment	4.9%	8	3.8%	8	5.1%	12
temporary employment	6.1%	10	3.3%	7	6.4%	15
further study	14.0%	23	5.2%	11	14.0%	33
not available for employment	9.1%	15	3.8%	8	2.6%	6
unemployed	3.7%	6	2.4%	5	3.8%	9

Looking at the outcomes of graduates by college one year after graduation revealed some distinct differences in the outcomes based on area of study, as shown above in Table 6.9. Less BA graduates were in any form of stable employment than either Business or Science graduates, however one explanatory factor may have been the high proportion of graduates from this college not available for employment (9.1%). Similar proportions of graduates from both the College of Social Sciences and Humanities and the College of Science (14%) had remained in education while this accounted for only 5% of business graduates. Business graduates were also slightly less likely to be in temporary employment or unemployment.

Career Status 18 Months On

Eighteen months after graduation, or two years after the majority of graduates had completed their study is the last time period for which data was available for all graduate cohorts. The change in the career states of graduates overall was

examined between each time period and changes at each six monthly interval were significant up to the end of the first year following graduation[4]. However, 18 months on, the change in the career states of graduates was no longer statistically significant. This suggests that between states career turbulence existed primarily within the first year following graduation. Despite this, the percentage of graduates entering permanent full time work continued to improve and an examination of the data available for 1999 and 1998 graduates over a longer time period showed this trend continuing but at a much reduced rate. After 18 months almost 80% of graduates were in stable employment of some kind and nearly 10% had remained in further study. Without consideration for the type of employment graduates had entered or their satisfaction, this suggests these graduates, irrespective of age, gender or degree did well in the New Zealand labour market within a relatively limited time period. Figures 6.2, 6.3, 6.4 depict the significant changes in career states over the first year following graduation.

[4] Six months later = (χ^2 (6, N = 611) = 22.51, p < .01); One year later = (χ^2 (6, N = 611) = 17.54, p < .01); 18 Months later = Not significant at 0.05 level.

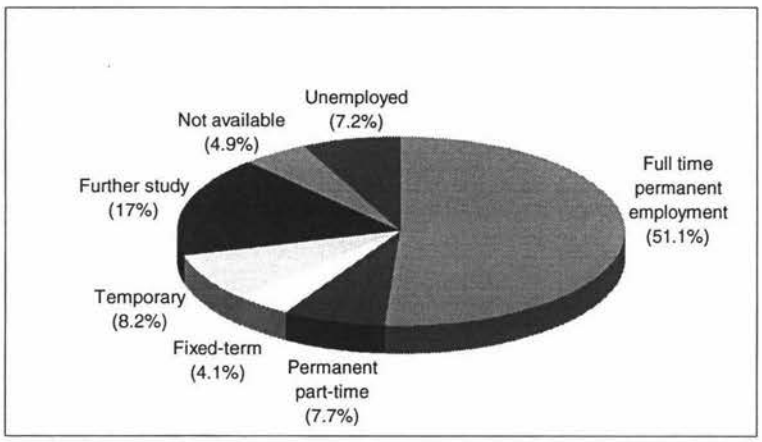

Figure 6.2. Main Activity At Graduation

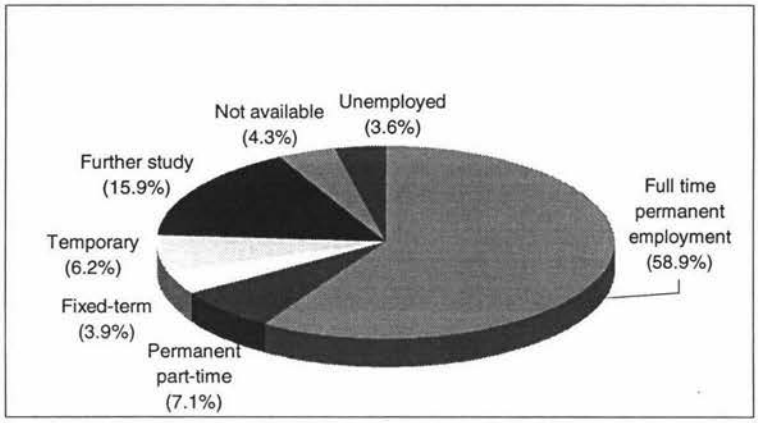

Figure 6.3. Main Activity Six Months Later

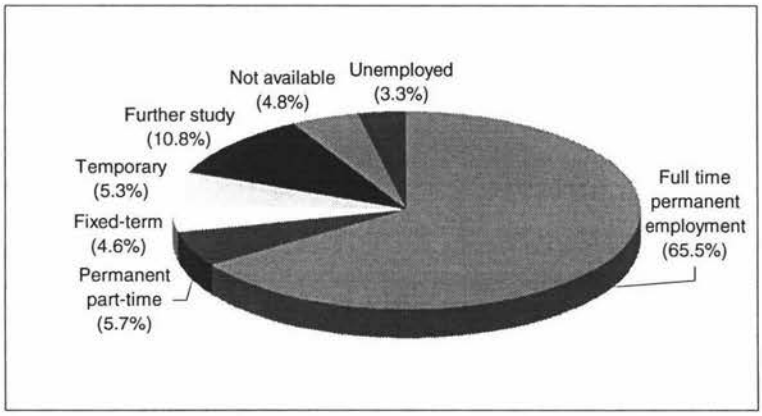

Figure 6.4. Main Activity One Year After Graduation

CAREER TURBULENCE

The numbers of graduates affected by this early career turbulence and which graduates these were is the focus of this next section. Table 6.10 shows the number of changes in career state graduates had following graduation. When all graduates

are included, over 70% of mature graduates had no turbulence or changes compared with a lesser 48% of traditional aged graduates. Overall, 28% of graduates had one change in their career state and nearly 13% had two changes within the first 18 months following graduation. The difference based on age group was found to be strongly significant (χ^2 (3, N = 608) = 32.61, $p < .01$).

Table 6.10. Number of career state changes by student age group

		Student Age Group				Total	
		Traditional Student 18-24		Mature Student 25+			
		Count	Percent	Count	Percent	Count	Percent
Number of changes	0	166	48.3	188	71.2	354	58.2
	1	118	34.3	51	19.3	169	27.8
	2	55	16.0	22	8.3	77	12.7
	3	5	1.5	3	1.1	8	1.3

Given the established effect of respondents already employed fulltime at the conclusion of their study, Table 6.11 below displays the same information but excludes those who were in full time work while studying. As can be seen, while this reduces the percentage of mature graduates not changing their career state following graduation, mature graduates on the whole were still likely to experience less career turbulence or changeability than traditional aged graduates. Overall those who had not been employed full time while studying had a greater tendency to at least one change in career state following graduation.

Table 6.11. Number of career state changes (Those NOT employed fulltime while studying)

		Student Age Group				Total	
		Traditional Student 18-24		Mature Student 25+			
		Count	Percent	Count	Percent	Count	Percent
Number of changes	0	150	47.6	62	54.4	212	49.4
	1	109	34.6	35	30.7	144	33.6
	2	51	16.2	14	12.3	65	15.2
	3	5	1.6	3	2.6	8	1.9

The impact of work experience on career changeability over the first eighteen months is highlighted in Table 6.12 below. It was found that full time paid work prior to attending Massey University significantly influenced whether or not a

graduate had experienced no change or 1 change since graduation (χ^2 (9, N = 610) = 37.39, p < .01). As shown in Table 6.13, graduates who had been employed full time while attending Massey University were most likely to experience no change following graduation.

Table 6.12. Number of changes in relation to full time work experience prior to study

		Full time paid work before Massey	
		Yes	No
Number of changes	0	68.7	48.7
	1	20.4	34.5
	2	10.2	14.9
	3	.7	1.9

Table 6.13. Number of changes in relation to full time work experience while studying.

		Full-time paid work during study	
		yes	no
Number of changes	0	80.2	49.7
	1	13.0	33.4
	2	6.8	15.1
	3		1.9

Finally, the number of changes was grouped into no change or any change in order to examine any relationships between the college within which the degree was completed and the likelihood of change between career states in the first 18 months following graduation. This was found to be significant, with BBS graduates being the least likely to experience change in their early career. No significant association was found between the class of the degree, in terms of the average grade of respondents, and the likelihood of changeability in their early career.

Job Hopping

In addition to examining change between career states, graduates were also asked to indicate how many permanent jobs they had held since graduation. This was intended to capture graduates who had remained in full time work but moved between jobs. As shown in Table 6.14 below, significant differences were found in relation to graduation year (χ^2 (6, N= 610) = 18.62, p < .01).

Table 6.14. Number of permanent jobs since graduation by graduation year

	Graduation Year			
	1998	1999	2000	Total
No permanent jobs	6.2%	12.2%	13.3%	10.7%
1 permanent job	48.5%	53.2%	57.3%	53.1%
2 permanent jobs	29.4%	23.9%	23.7%	25.6%
3 or more jobs	16.0%	10.7%	5.7%	10.7%

In particular, less 1998 graduates had been in no permanent employment and more of this same cohort had been in 2 or more permanent jobs since graduation. Overall, 36% of graduates had been in 2 or more jobs since graduation. This amounted to a time period of three and a half years for 1998 graduates and just 18 months for 2000 graduates. This suggests that in addition to between career state changes for some graduates, between job changes are also occurring for a number of graduates in a relatively short time period. The student age group of graduates was not found to have any significance.

Labour Market Experiences

This section focuses on the experiences of respondents who had spent time since graduation in career states other than stable employment. This included temporary employment, further study, being unavailable for employment or in the worst-case scenario, unemployed. In each instance, graduates who had experienced one of the career states above were asked to provide information regarding the length of time and their main reasons for time spent in career states other than stable employment. These findings, which relate to research question five, are outlined below.

TEMPORARY EMPLOYMENT

For the 31% (N=196) of graduates who had experienced a period of temporary employment since graduation, the median length of time spent in temporary employment was 6 months. Of these graduates, 55% had been in a temporary employment position; a further 30% had been in two temporary positions and the

remaining 15% had been in anything from 3 to 8 positions since graduation. Chi-squared analysis showed no significant differences amongst those who had spent time in temporary employment but there were some significant differences between these graduates and those who had not been in temporary employment. Traditional aged students were significantly more likely to have spent time in temporary employment. Place of residence since graduation was also significant with those who had headed overseas since graduation more likely to have spent time in temporary employment.

Respondents were then asked to indicate from a range of options, what their reasons for taking up temporary employment had been. These included family reasons, needed the money, couldn't find permanent work; interested in the work; thought it may lead to a permanent job; to get work experience. Figure 6.5 below outlines the percentages of graduates responding to each of the alternatives.

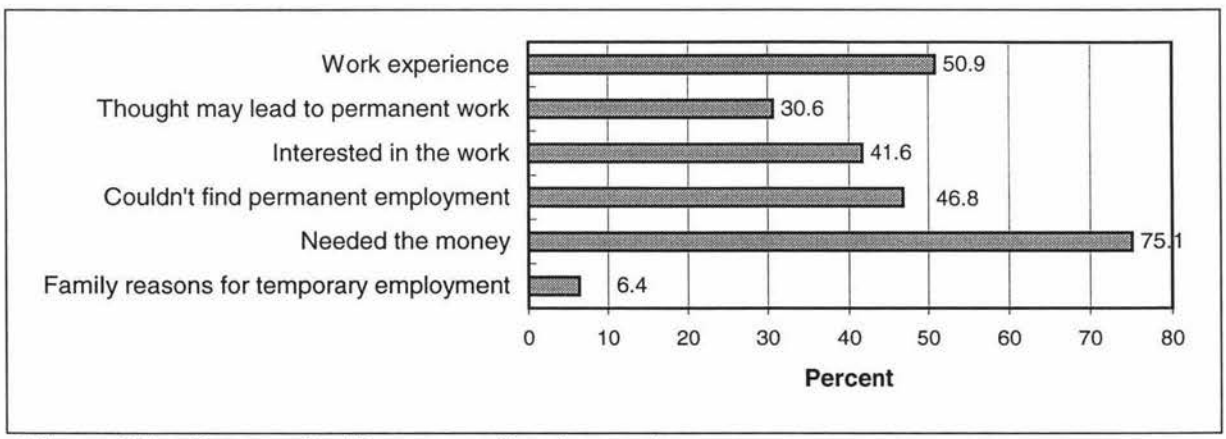

Figure 6.5. Reasons for Temporary Employment

Of the graduates who had entered temporary employment, 75% suggested they had done so because they needed the money and half of the graduates also saw their temporary employment as an opportunity to gain work experience. An examination by student age group found mature graduates indicated that they believed it would lead to permanent employment more frequently than traditional aged graduates and were also far more likely to have taken the work for family reasons. However, for both age groups the most common explanation was their need for money. By 18

months after graduation only 5% of graduates remained in temporary employment with this proportion reducing even further for 1999 and 1998 graduates over time.

FURTHER STUDY

Following permanent full time employment, the next highest group of respondents' re-entered education following graduation. Over half of the graduates (53%) who responded to this survey indicated they had carried out further study since graduation although for some this was while in employment also. A comparison of those who had entered further study with those who had not against a range of independent variables found graduation year to be significant in relation to the uptake of further study with higher proportions of 1998 and 1999 graduates having entered further study. One explanation for this may have been the longer time periods available for these graduating cohorts within which to re-enter study. Interestingly, in relation to further study, there was no difference in the likelihood of graduates entering further study based on their student age group.

As with temporary employment, graduates were asked to indicate, from a range of options, their reasons for engaging in further study. Four alternatives were offered including 'to gain formal entry requirement for a specific career'; 'to enhance career prospects in a particular field or job', to enhance career prospects in general'; 'to follow a personal interest'. Of these, to enhance career prospects in a particular field or job was the most common response with nearly 60 % of graduates selecting this. To enhance career prospects in general or follow a personal interest were both selected by 43% of respondents, although cross-tabulation by gender showed men were proportionately more likely to have undertaken further study to enhance career prospects in general.

Table 6.15. Reasons for Undertaking Further Study by College

	College within which degree completed			
	College of Social Sciences and Humanities	College of Business	College of Science	Total
Further study a formal requirement	31.9	42.3	20.2	31.5
Enhance career prospects in specific field	56.4	51.4	65.1	57.6
Enhance career prospects in general	40.4	37.8	49.5	42.7
Follow personal interest	59.6	25.2	46.8	43.0

Table 6.15 above highlighted some interesting variations in reasons for entering further study based on the college within which the degree was completed. College of science graduates were more likely than either of the other colleges to undertake further study to enhance their career prospects. BBS graduates were least likely to have indicated they had entered further study to follow a personal interest (25%) and BA graduates most likely (60%).

NOT AVAILABLE FOR EMPLOYMENT

One in five graduates (N=141) graduates had spent some time unavailable for employment. The majority of graduates in this study, however had spent six months or less unavailable for employment. This may have reflected the largely New Zealand based sample, which had predominantly chosen not to travel for long periods of time. Also, while travel was the most popular reason graduates gave for taking time out from the labour market or education, it was not the only explanation. Other reasons included time out for children or other dependents, time out due to ill health, time out due to age (retirement), awaiting the start of a pre-planned job or study.

An independent T-test found student age group significantly affected the time graduates spent unavailable to the labour market. Traditional graduates took time out for an average length of 5.7 months, while mature graduates took an average 9 months out. This suggested the reasons for taking time out might differ by age as

well with mature graduates tending to take time out for more long-term reasons. Table 6.16 below highlights the distribution of reasons offered by the different age groups. Most traditional graduates took time out to travel or for a leisure break or because they were waiting for a job or course to start. In comparison, the variety of reasons offered by mature graduates for taking time out were more diverse, with 42% suggesting they had taken time out for family reasons and 14% being unavailable due to their age. Travel was still the most common reason given for both groups.

Table 6.16. Reasons for taking time out by Student Age Group

	Student Age Group	
	Traditional Student 18-24	Mature Student 25+
Time out from work or study for children/dependants	3.9%	42.0%
Time out due to ill health	11.7%	12.0%
Time out due to age		14.0%
Time out for travel or leisure	74.0%	44.0%
Awaiting start of pre-planned job or study	15.6%	12.0%

UNEMPLOYMENT

Unemployment was defined for the purposes of this study as those not in work but seeking employment. At graduation, six months after the majority of graduates had completed their study, only 7.2% of graduates overall were unemployed. Six months later, this figure had dropped to 3.6% of all graduates. Despite this, 23% of the respondents (N=146) indicated they had been unemployed at some point since completing their study. The explanation for the differences may lie predominantly in the fact that two thirds of this group suggested they were unemployed for less than 6 months and the change in labour market status of the questionnaire asked about their career state over six month time periods.

Those who had experienced any time in unemployment were asked to indicate what sort of work they were looking for or prepared to accept. Respondents were asked

to report whether or not they were prepared to work 'in any geographic location', 'at any level of employment', in any size company', 'in any type of organisation', and 'in any type of occupation'. Ninety percent of graduates who had experienced unemployment were prepared to work in any size organisation, making this the least contentious aspect of their job search. The majority of respondents were also willing to work at any level of employment (58%), in any organisation (61%) and in any type of occupation (65%). However, only 45% of graduates were prepared to work in any geographic location, using chi-squared analysis, this variable was also found be significant based on the age of graduates.

Only one third of mature graduates were prepared to work in any geographic location. There was also a statistically significant relationship using the chi-squared test between the length of time in unemployment and the mobility of graduates in terms of their willingness to work anywhere. This meant those who would not work in any geographic location were likely to remain unemployed longer. The other factor, which was also found to be significant in relation to the length of unemployment, was whether graduates were prepared to work at any level of employment again with those not prepared to work at any occupational level likely to take longer to find work. Overall, however unemployment for most graduates in this study was a short-lived experience, if it was experienced at all and it was very small minority of graduates who experienced sustained unemployment.

Employment Experiences

This section of the results chapter examines the outcomes and experiences of graduates who had spent time in permanent or fixed-term employment since graduation. In particular, the emphasis here is not necessarily on their initial destinations but on their employment experiences in their current jobs. While the significant majority of the graduates had entered some form of permanent employment 18 months after graduation, these findings attempt to provide a more detailed picture of what sort of employment that is, both in terms of the graduate

nature of the work and the satisfaction of graduates concerning their employment outcomes. The intent is to examine not just whether they are in work but the extent to which it is the work they want to be in. Obviously for those graduates who had not entered stable employment since graduation, this section of the survey did not apply and therefore they are not included in this section of the results.

NATURE OF CURRENT JOB

Full time or Part time Working Arrangements

Of the respondents who answered this section of the survey, 90% were in full time work. When this was examined by student age group there were found to be significant differences (χ^2 (1, N = 541) = 41.76, $p < .01$) according to age. Consistent with earlier findings in this study, mature graduates were far more likely to be in part-time employment than traditional graduates. Of those in employment, 96.5% of traditional graduates were in full time employment compared with 79% of mature graduates. A smaller effect but still significant at the 0.01 level was found in relation to gender (χ^2 (1, N = 542) = 14.69, $p < .01$). Females (15%) were more likely than males (5%) to be employed in part-time employment.

The full time or part time nature of graduate jobs according to the College they studied in was analysed while controlling for the student age group of respondents. There was no significant difference amongst traditional aged graduates but mature graduates who studied completed a BA in the College of Social Sciences and Humanities were significantly more likely than either business or science mature graduates to be in part time employment (χ^2 (2, N = 228) = 18.13, $p < .01$).

Fixed Term Employment

Just 10% of graduates who had entered stable employment described their position as a fixed term arrangement. The average length of fixed term contract was 32 months but slightly more than 50% indicated they had a fixed term contract of 12 months or less, which was defined in the survey definitions as 'temporary

employment'. Despite this, all graduates who had described themselves as under fixed term arrangement for this question were analysed in relation to several demographic variables. There was no significance in relation to age, gender or qualification but geographic location appeared to be a significant factor influencing the job contract. Those living in large urban centres were slightly more likely to be on fixed term contracts and this was found to be significant at the 0.05 level (χ^2 (2, N = 549) = 6.55, $p < .05$).

Self-Employment

Just under 5% of those in stable employment described themselves as self-employed and as might be expected, this bore a significant relationship to the student age group of graduates. Nearly 10% of mature graduates in employment, while fewer than 2% of traditional graduates were self-employed. There were no significant differences according to the gender, type of qualification or year of graduation of self-employed respondents.

ORGANISATIONAL SIZE

As shown in Table 6.17, over 50% of graduates were employed by large organisations with 100 or more employees. The next largest group of graduates (27.3%) were in small organisations according to the definition of Cameron and Massey (1999). The implications for levels of remuneration and job difficulties or satisfaction will be explored. The relationship between geographic location of graduates and the size of their employing organisation was found to be significant at the 0.05 level (χ^2 (6, N = 546) = 13.61, $p < .05$).

Table 6.17. Percentage Employed by Size of employing organisation

		Total
Number of employees in company	Less than 5 employees	8.6%
	5 - 49 employees	27.3%
	50 - 99 employees	9.9%
	100+ employees	54.2%

INDUSTRY SECTOR

Job information provided was used to examine both the industry sector in which graduates were employed and their reported occupational level using the Major Group categories of the New Zealand Standard Classification of Occupations 1999 (See appendix A). The occupational level of graduates was also compared with their stated expectations regarding employment outcomes. As before, given the quite distinct circumstances of traditional aged and mature graduates, these comparisons were conducted separately for each age group.

Industry Classification and relevance of study to work

Using the Australian and New Zealand Standard Industry Classification (Australian Bureau of Statistics, 1998), the industries graduates had entered were examined in relation to the type of qualification graduates had studied towards. As shown in Table 6.18 below, there were clear trends according to the college graduates had studied within.

Graduates from social sciences and humanities were most strongly represented in education or health and community services, and science graduates were most likely to be in agriculture, forestry and fishing, and business graduates in property and business services or finance and insurance. Overall however, property and business services were well represented across all three colleges and those who had entered the service sector accounted for more than 70% of those graduates in stable employment.

Table 6.18. Industry Sector by College within Which Degree Completed

		College within which degree completed		
		College of Social Sciences and Humanities	College of Business	College of Science
ANZIC	Agricultural, Foresty and Fishing	.8%	4.4%	29.8%
	Manufacturing	.8%	6.3%	9.8%
	Electricity, Gas and Water Supply	.8%	1.0%	1.5%
	Wholesale Trade		2.4%	2.0%
	Retail Trade	2.3%	4.9%	4.9%
	Accomodation, Cafes and Restaurants	.8%	.5%	.5%
	Transport and Storage	.8%	3.4%	2.0%
	Communication Services	2.3%	1.9%	.5%
	Finance and Insurance	3.0%	11.7%	4.9%
	Property and Business Services	12.8%	33.0%	20.5%
	Government Administration and Defence	9.8%	7.8%	12.2%
	Education	33.1%	5.3%	7.8%
	Health and Community Services	27.8%	6.3%	1.5%
	Cultural and Recreational Services	3.0%	7.3%	1.0%
	Personal and Other Services	2.3%	3.9%	1.5%

OCCUPATIONAL LEVEL OF EMPLOYMENT

Overall, as depicted below in Figure 6.6, the largest group of respondents were employed in professional occupations (35%) and 70% of all respondents were in associate professional roles or higher. While the trend towards employment in the three top occupational categories remained consistent across student age group. There was a significant difference in the distribution within these categories according to age (χ^2 (5, N = 545) = 22.57, $p < 0.01$). Mature graduates were more likely to be Legislators, Administrators and Managers (20.6%) than traditional

graduates (11.2%). Conversely, 30% of traditional graduates were in technician and associate professional roles, while this accounted for just 17.2% of mature graduates.

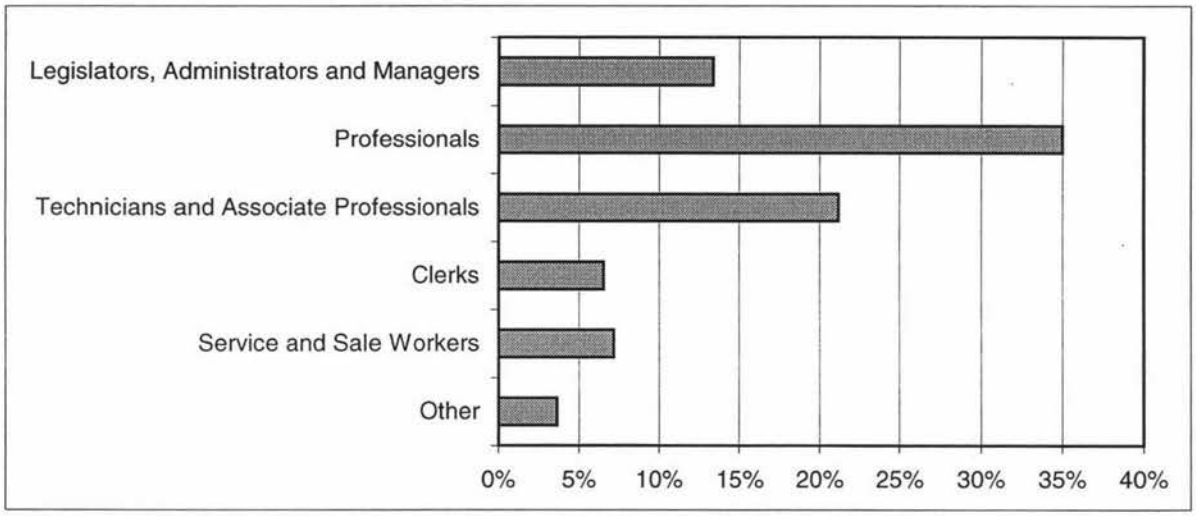

Figure 6.6. Occupational level of graduates in stable employment

Given that previous work experience may have contributed to these differences, the effects of full time work experience of one year or more prior to study and full time work experience during studying were examined while controlling for student age group. No significant difference was found in relation to full time work experience prior to study, however, full time work experience during study made a significant difference for mature graduates (χ^2 (5, N = 231) = 13.98, $p < 0.05$). As shown in Table 6.19, mature graduates in Legislator, Administrator and Management positions were more likely to have been in full time employment while studying, while the reverse was true for mature graduates in technician or associate professional roles.

Table 6.19. Occupational Level of Mature Graduates in Full time Work During Study

		Full-time paid work during study	
		yes	no
Occupational level of employment	Legislators, Administrators and Managers	25.9%	12.0%
	Professionals	47.5%	42.4%
	Technicians and Associate Professionals	11.5%	25.0%
	Clerks	5.0%	7.6%
	Service and Sale Workers	8.6%	8.7%
	Other	1.4%	4.3%

There were also significant differences to the occupational level of traditional aged graduates based on gender (χ^2 (5, N = 312) = 25.66, $p < 0.01$). Table 6.20 shows 17% of traditional aged male graduates were in the top occupational category compared with a lower 6% of females. At the lower end of the occupational scale, 10% of young male graduates were engaged in 'Other' work. This included agricultural and fishery workers, trade workers, plant and machinery operators and assemblers and elementary workers. Interestingly however, females were better represented in all of the intervening categories.

Table 6.20. Occupational Level by gender for traditional aged graduates

		Male	Female
Occupational level of employment	Legislators, Administrators and Managers	17.1%	6.0%
	Professionals	33.6%	39.8%
	Technicians and Associate Professionals	26.0%	33.1%
	Clerks	5.5%	11.4%
	Service and Sale Workers	7.5%	8.4%
	Other	10.3%	1.2%

Expected and Realised Occupational Level

There was found to be significant movement, using chi-squared analysis, between the expected and realised occupational levels of graduates. However, using Wilcoxon Signed Ranks, the direction of this movement on a case-by-case basis was not found to be significant overall or in relation to age, gender, or college studied in. A notable exception to this was graduates who had described themselves as experiencing underemployment in their work. As might be expected, a significant proportion had entered employment below their reported expectations, T = (z = -3.161, $p < .05$). Further analysis concerning the underemployment of graduates is reported later.

REMUNERATION

Despite having asked respondents to indicate their full time equivalent salary, some of those in part-time employment appeared not to have done so. Particular evidence of this included the number of mature graduates reporting to be earning less than $20 000. To avoid this moderation effect, only the responses of those graduates in full time employment were examined. This represented 476 or 76% of the respondents. As shown below in Figure 6.7, mature graduates and traditional aged graduates showed markedly different distributions of earnings.

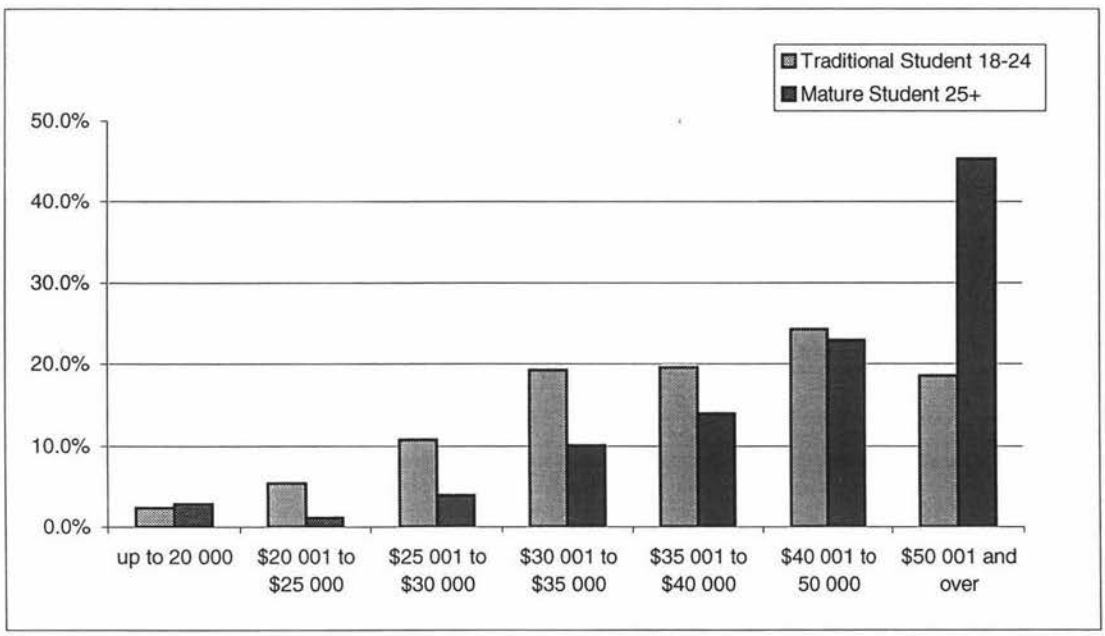

Figure 6.7. Remuneration Level of Graduates in Full time Employment according to Student Age Group

Given this significant difference, all other variables analysed in relation to remuneration levels were conducted separately for each age group. Variables examined included graduation cohort, with the expectation that length of time in the labour market would be related to higher earnings. Gender, college studied in, and organisational size were also investigated. In order to reduce the degrees of freedom for purposes of cross tabulation and chi-squared analysis, remuneration brackets were reduced to three categories, up to $30 000, between $30 001 and $50 000 and over $50 000.

Traditional Aged Graduates

The graduation cohort was found to be significant for traditional aged graduates only (χ^2 (4, N = 297) = 15.94, $p < 0.01$). In particular, it was noted that a higher proportion of 1998 graduates were earning over $50 000 than either of the following cohorts. This accounted for 28% of 1998 graduates, 21% of 1999 gradautes and 7% of 2000 graduates. Significant earning differences were found between males and females as shown in Table 6.21. While similar proportions of both gender were earning between $30 001 and $50 000, females were more likely to be earning under $30 000 and males more likely to be earning over $50 000 than their counterparts.

Table 6.21. Remuneration by gender for traditional graduates

	Male	Female
Less than $20 000 up to $30 000	13.4%	23.2%
$30 001 up to $50 000	63.4%	62.6%
Over $50 000	23.2%	14.2%

Mature Graduates

Perhaps given the high number of mature graduates already in employment while studying, no significant differences were found in remuneration levels based on the graduation cohort of respondents. However, like traditional aged graduates, there were significant differences in relation to gender (χ^2 (2, N = 179) = 13.35, $p < 0.01$). For men, 61% were earning over $50 000 and 36% were earning between $30 000 and $50 000, while this was somewhat reversed for women with 54% earning between $30 000 and $50 000 and just 35% were earning over $50 000. While, 11% of full time female mature graduates were earning less than $30 000, this was still lower than the respective proportions of traditional aged graduates earning under $30 000 (see Table 6.21 above).

The college graduates had studied in was only significant for mature graduates (χ^2 (4, N = 179) = 16.86, $p < 0.01$). Closer examination showed that almost 60% of mature

graduates who had completed a bachelor of business studies were earning over $50000. This compared with 38% of graduates from the Arts, and 19% of Science graduates.

Organisational Size

Organisational size was found to be significant for the remuneration levels of both age groups and was therefore investigated for the all graduates in full time work (χ^2 (6, N = 474) = 37.05, $p < 0.01$). An examination of the proportion of graduates earning under $30 000 for micro, small, medium and large organisations, indicated a declining proportion the larger the organisation. This accounted for 32% of traditional aged graduates in micro organisations (less than 5), 23% of graduates in small organisations (5 – 49), 15% of young graduates in medium sized firms (50 – 99) and just 7.5% of graduates in large organisations (100+ employees). Similar trends in the reverse order were noted for graduates earning over $50 000.

UNDEREMPLOYMENT

The first question directly exploring the graduate nature of their secured employment investigated the origin or history of the position. This included whether the position was new, semi-new or previously existing, the reported proportions for each being outlined below in Table 6.22.

Table 6.22. History of Secured Position

	Count	Percent
Position newly created	155	28.1%
Position existed previously but modified	107	19.4%
Existing position	263	47.7%
Unsure	26	4.7%
Total	551	100.0%

Of particular interest to this study, were graduates who had entered a existing job. They were asked to indicate whether the position had been previously held by a university graduate. Of the graduates in existing positions (N = 263) nearly 30% were in positions not previously filled by a graduate and a further 23% were unsure of the status of the previous jobholder.

There were no significant differences found in relation to student age group. Strongly significant results were found, however, in relation to the occupational level of graduates (χ^2 (6, N = 274) = 36.53, $p < 0.01$). The majority (56%) of graduates employed at lower occupational levels (below 'technicians and associate professionals) were in positions not previously held by a graduate and a further 32% were unsure of the previous jobholders status. This compares with 55% of professionals and similar proportions of the other two top occupational groupings, who were in positions previously held by a graduate. This corroboration strengthens the argument that occupational level is a useful indicator of the graduate nature of employment positions.

Graduates were also asked to indicate whether they would described their job as 'graduate' employment based on a series of statements. These included; A degree was a formal entry requirement (41%); A degree was helpful in getting the job (45%); The work requires graduate ability (35%); The previous holder was a graduate (8%); Entry was via a graduate training programme (5%); None of the above (20%)[5]. The response to this final option suggesting that 1 in 5 graduates did not describe their work as graduate employment.

Again, in relation to occupational groupings there were some clear differences between graduates with occupations in the three top levels and the others. Table 6.23 below highlights the important differences in responses according to occupational level.

[5] Please note, the percentage of responses to each statement does not add to 100% because respondents were invited to tick any that applied.

Table 6.23. Graduate Employment by Occupational Level

	Occupational Groupings			
	Legislators, Administrators and Managers	Professionals	Technicians and Associate Professionals	Lower Occupational Levels
Degree formal entry requirement	38.5%	57.1%	43.6%	7.5%
Degree helpful in obtaining position	47.0%	41.6%	50.4%	44.3%
Work requires graduate ability	41.0%	37.4%	42.8%	14.2%
None of the above	16.9%	11.0%	15.0%	47.2%

Interestingly, while almost half of the graduates in the lower occupational level suggested they were not in a graduate position ('none of the above') and only 14% suggested the work required graduate ability, 43% still indicated the degree was helpful in obtaining their position.

Finally, graduates were also asked to indicate and explain the level to which they were experiencing underemployment in their work. This question was designed to move away from the more objective measures of graduate employment and allow the respondents to personally evaluate whether they were being used to their full capacity or potential. Respondents were also asked to provide a description of any ways in which they felt underemployed. Of the 550 graduates who responded to the question, 50% reported no underemployment in their job, 30% suggested they were 'slightly underemployed' and 20% described themselves as 'very underemployed'.

Significant differences in reported levels of underemployment were found in relation to the type of degree graduates had completed (χ^2 (4, N = 550) = 16.44, $p <$ 0.01). As shown in Table 6.24, College of Science graduates were least likely to describe themselves as underemployed and significantly less likely to feel 'very underemployed' than either BA or BBS graduates.

Table 6.24. Level of Underemployment Experienced by College Studied In

	College of Social Sciences and Humanities	College of Business	College of Science
Not at all underemployed	42.5%	48.1%	56.3%
Slightly underemployed	29.9%	28.4%	32.2%
Very underemployed	27.6%	23.6%	11.5%

No significance difference was found in relation to age, gender or prior work experience. Once again however, a strongly significant relationship was found between occupational level and experienced underemployment (χ^2 (6, N = 542) = 49.33, $p < 0.01$). Those from the lower occupational levels were significantly more likely to describe themselves as very underemployed (40%), Legislators, Administrators and Managers, and Professionals were most likely to not be experiencing any underemployment (62.7% and 57.5% respectively). Interestingly, this still left reasonable proportions of these occupational levels reporting themselves as either slightly or very underemployed. In the case of Technicians and Associate Professionals, over half (58%) were experiencing some level of underemployment, with 24% of those being very underemployed.

Satisfaction with Career Development

CAREER DEVELOPMENT

Graduates were asked to rate their level of satisfaction on a 3-point scale for several aspects of their career development including, pace of career progress; opportunities available; support and advice given; use of skills and experience; overall career development. Overall, graduates were relatively well satisfied with their career outcomes. For each of the five dimensions listed above, approximately 20% of graduates suggested they were 'not at all satisfied'. Using ANOVA, several variables were analysed in relation to career satisfaction to establish where any significant variations lay. Firstly, the gender, student age group, and graduation

year of graduates were examined. In addition to these, the current employment status of respondents, their geographic location, organisational size, occupational level and experienced levels of underemployment were examined. The following significant results were found:

Student Age Group

The age group of student was found to be significant for two aspects of their career since graduation. Mature graduates were less satisfied with the opportunities available $t(587) = 0.24$, $p < .01$ and the support and advice given to them $t(577) = 2.37$, $p < .01$. Gender and the length of time in the labour market (graduation year) were not found to be significant.

Current Employment Status[6]

The current employment status of graduates was highly significant to their levels of career satisfaction for all five dimensions. Where the significance lay was established through post-hoc analysis using LSD. Post-hoc analysis showed all graduates in career states other than stable employment were less satisfied with *pace of career progress* (F (3, 576) = 11.88, $p < .01$) and use of skills and experience (F (3, 568) = 4.51, $p < .01$). Those in temporary employment or not in employment were less satisfied with *opportunities available* than those in stable employment (F (3, 578) = 9.13, $p < .01$). *Support and advice given* to graduates (F (3, 568) = 4.51, $p < .01$), was less satisfactory for those who were not in employment than graduates in either stable employment or further study. Finally, in terms of *overall career development*, graduates in temporary employment were less satisfied than those in stable employment, while those who were not in employment were less satisfied than those in stable employment or further education.

[6] Number of career states was reduced from 7 to 4 for purposes of analysis. These included stable employment, temporary employment, further study and not in employment.

Organisational Size

Organisational size was found to be significant for three dimensions of career progress. These included pace of career progress, opportunities available, overall career development. The strongest significance was found in relation to opportunities available (F (3, 535) = 3.38, $p < .01$). Post-hoc analysis revealed that graduates in small organisations (5-49 employees) were less satisfied than graduates in medium or large organisations. Interestingly, graduates in micro organisations did not show similar trends.

Occupational Level

Like current employment status, all aspects of career development showed significant differences according to occupational level. In particular, post-hoc analysis showed graduates employed in lower occupational levels were less satisfied than those in all of the top three occupational levels and this was consistent across all five career dimensions. Technicians and Associate Professionals were less satisfied than Legislators, Administrators and Managers in relation to pace of career progress, opportunities available and overall development.

FUTURE CAREER EXPECTATIONS

Graduates were asked to indicate from a range of alternatives, including both employment and non-employment options, where they expected to be a year from now. These were coded into four variables: Same organisation; New Organisation; Not in employment (time-out, further study or unemployed); and Unsure, the aggregate results for which are shown in Table 6.25 below. Separate analysis was also conducted of numbers expecting to enter further study irrespective of other future labour market expectations.

Table 6.25. Expected career state one year from now.

		Count	Percent
Future Career Expectations	Same Organisation	320	52.3%
	New Organisation	156	25.5%
	Not in Employment	62	10.1%
	Unsure	74	12.1%
Total		612	100.0%

Over 50% of graduates expected to be in the same job in one year's time. The future career expectations of graduates did not appear to be related to their length of time in the labour market (graduation year) or their student age group or gender. There were however significant relationships between levels of perceived underemployment and satisfaction with aspects of career development, which are discussed in more detail below.

Perceptions of underemployment

Using chi-squared analysis, there were found to be significant differences in the expectations or intentions of graduates based on the stated levels of underemployment in their jobs (χ^2 (6, N = 537) = 17.63, $p < 0.01$). In particular, the majority of graduates (60%) who had experienced no underemployment in their work expected to remain in the same organisation, as opposed to a lesser 40% of graduates who described themselves very underemployed.

Satisfaction with Career Development

There was found to be a strongly significant relationship between the future expectations or intentions of graduates and the level of satisfaction with all aspects of their career development. These significant results are displayed in Table 6.26 below.

Table 6.26. F- values for Satisfaction with Career Development and Future Employment Expectations

	ANOVA values
Pace of career progress	$F(3, 572) = 3.65, p < .05$
Opportunities available	$F(3, 573) = 4.89, p < .01$
Support and advice given to	$F(3, 563) = 4.54, p < .01$
Use of skills and	$F(3, 574) = 4.11, p < .01$
Overall career development	$F(3, 575) = 5.75, p < .01$

Post-hoc analysis showed that graduates expecting to enter a new organisation were significantly less satisfied with all five dimensions of career development than graduates intending to remain in the same employment. With respect to overall career development, graduates expecting to find new employment were also less satisfied with career development than graduates who were unsure of their future expectations. Those who were unsure were predominantly respondents who were uncertain about whether they would stay in the same job or find new employment. Finally, graduates expecting not to be in employment also showed lower levels of satisfaction with pace of career progress, use of skills and experience and overall career development, than graduates expecting to remain in the same employment.

Analysis of graduate responses provided a number of interesting findings and generated a number of interesting questions likely to require further investigation at a later date. In particular, a common theme throughout this results section was the influence of age, or student age group, on both expectations and experiences. Overall, while the majority of graduates reported satisfactory labour market outcomes, there were a significant proportion of graduates for whom entry into the labour market had been difficult or disappointing. For the purposes of the current study, the next chapter reviews these results in light of the aims of the research and established literature in the area.

CHAPTER 7: *Discussion*

The aim of this research was to provide a comprehensive understanding of employment expectations and experiences for New Zealand graduates and implications for early career satisfaction in the context of tertiary education in New Zealand. Seven research questions were developed to investigate the transition process from study to work. The objective of this chapter is to discuss each of these questions with regard to both the results of this study and established findings in the literature. Throughout the following discussion, potential areas for future research are also briefly highlighted. Finally, the limitations of this study are identified and their implications are addressed.

RESEARCH QUESTION ONE:

What are the trends in tertiary participation in New Zealand?

Life-long learning is a concept, which is defined in a variety of ways, subject to the agenda of different interest groups in society (Alhiet, 1999). However, at its simplest, life-long learning concerns the opportunity for individual involvement in learning throughout life. The extent to which a society supports life-long learning might be partially assessed through the number and nature of individuals entering formal education institutions.

Within New Zealand the need to develop effective strategies for the promotion of life-long learning (McKenzie and Wurzburg, 1997) has been translated by key stakeholder groups in education as necessitating the provision of open access to post-secondary education for individuals of all ages. Another strategy has been to increase flexibility in the delivery of tertiary education through the facilitation of distance learning. Massey University, from which the sample was drawn, is the only New Zealand university with an established programme for distance education.

An examination of the relationship between student age group and mode of study would suggest that the opportunity for distance learning contributed significantly to mature graduate numbers. Almost 90% of mature graduates were extramural or mixed mode students. This argument is strengthened by the high proportion of mature graduates who indicated extramural offerings were a dominant influencing factor in their decision to study at Massey (81%). This lends weight to the argument that improving flexibility of education facilitates a culture of life long learning.

Open access and flexibility in the delivery of education also has implications for groups in society who may have previously been excluded. Egerton (2000) argues the uptake of tertiary study by mature women reflects the response to new opportunities through social acceptability or economic necessity where post-secondary education may once have been inaccessible or considered inappropriate. Within the present study, 65% of mature graduates and 58% of the total sample were female. This echoes the national trend towards higher growth and participation rates of women in tertiary study (NZVCC Graduate Destinations Report, 2000; New Zealand Tertiary Education Sector Profiles and Trends, 1999).

Combining Work and Study

Associated with offering flexibility in the delivery of education is the issue of students choosing to combine work and study. In this study, 61% of mature graduates were in full time work while studying and when examined by gender this increased to 71% for mature male graduates. When the average number of hours worked per week was examined by mode of study, extramural and mixed mode students, who were more likely to be part-time students, worked an average of 26 hours per week. The implications of this balancing act for both educational attainment and work performance could be the focus of some interesting research. Within the current study however it was found that graduates who were working full time while studying had few problems with employment outcomes. Egerton (2001) suggests that part-time degree study has risen steeply during the 1990s,

however it seems rather than intending to change careers, they may be acquiring credentials simply to retain their positions in their current careers.

Several mature graduates within the present study took the opportunity provided at the end of the survey for any additional comments, to explain their return to education as an 'insurance policy' despite being comfortably employed at present. Take the following comment from a 42-year-old, female Flight Attendant who took 10 years to complete her degree.

> *I am in the same occupation as I was when I started and finished my degree. I expect that if I was made redundant or desperately needed a career change that my qualifications would assist in finding new employment. Basically, my degree is an 'insurance policy' (I hope) if I need to move on from my present occupation.*

Another mature graduate (49-year-old, male Senior Business Analyst) wrote:

> *Degree qualification is a good entry point for higher higher-level employment. Non-degree qualified people with a good performance record may achieve similar career opportunities but the instances are limited.*

Evidence was also found to support the idea of increasingly blurred distinctions between study and work for young adults (Curtis and Lucas, 2000). In this study, while just 9% of traditional aged graduates were in full time work while studying, 55.6% had engaged in part-time work while studying. In addition, almost 20% had full time work experience prior to attending university. Curtis and Lucas (2000) suggest both financial necessity and the desire to gain work experience are driving this increasing trend.

Prior Qualifications and Continuing Education

Also crucial to any discussion concerning life long learning is the extent to which individuals are re-entering education, or continuing with education following the completion of their degree. Twenty percent of the graduates within this study had already completed a post-secondary qualification prior to the current bachelor degree. As might be expected the majority of these were mature graduates,

traditional aged graduates having less time prior to university study within which to complete another qualification. Additionally, while the reasons behind graduates entering further study following the completion of their degree are explained elsewhere in this discussion, the numbers doing so is worth commenting on. Since graduation, 53% of graduates had carried out some form of further study. Evidence from a study examining participation in post-compulsory education and training in New Zealand supports this finding. Gobbi (1998) found that people with higher qualifications and those with more years in post-school education were more likely to participate in on-going education and training.

Several researchers argue (Dugdale, 1997; Tobias, 1999; Schuller, 2000) that competition for a limited number of graduate positions is driving individuals to continue up-skilling in order to differentiate themselves. Conway and McLoughlin (2002) highlighted the implications of the changed structure of the New Zealand economy and labour market where most jobs are found in the service sector, requiring a broadly skilled and highly educated workforce. It is necessary to question whether this trend towards continuing study is more indicative of a love for learning, or, as suggested by Livingstone (1998), a labour market where employers, able to dictate terms, are placing a heavy emphasis on accreditation and higher-level credentials.

More light is shed on this in the discussion of the following six research questions developed to investigate the employment expectations and experiences of recent graduates. While the study explores the transition from study to work, it is important to bear in mind that as discussed previously, for many of these graduates this transition is not clear cut, with many having worked while studying and others continuing to study upon entering employment.

RESEARCH QUESTION TWO:

What influenced the study choices of these graduates?

While graduates may be motivated to study in order to improve employment options (Cox and Pollock, 1997; Muysken and ter Weel, 2001), when making a decision regarding what to study, the majority of graduates (83%) in this study indicated they had chosen their topic because they were interested or good at the subject. This suggests that while the overriding desire to gain a tertiary qualification influenced all these graduates, not all graduates are driven solely or perhaps, primarily, by the instrumental employment outcomes likely to be realised.

Half of all respondents did indicate they had been influenced by the likelihood of job opportunities in selecting their degree. When this was explored in relation to their choice of degree, graduates who had completed a Bachelor of Technology (78%), Information Science (62%) or Business Studies (62%) were more likely to have considered the job opportunities when they chose their course of study. Graduates were also asked to indicate how important future earning potential had been to their study choices and again, BTech and BInfSc graduates were most inclined to have considered this as important. This more instrumentalist attitude towards their qualifications provides an interesting context for the employment expectations and outcomes of these graduates.

RESEARCH QUESTION THREE:

What were their employment expectations following completion of their degree and did these alter while they were studying?

Career Expectations

Close to half of all graduates (46%) suggested their career expectations had changed while they were studying, however the explanations for this differed somewhat according to student age group. Of the traditional aged graduates, significantly more BA and BSc had altered their expectations during their study. This finding, in

conjunction with the low number of BA and BSc graduates who had been influenced by future job opportunities in selecting their degree, may indicate that employment outcomes become a focus for many younger students during their study rather than prior to commencement.

Younger graduates, in their explanations for changes, tended to emphasise a downward adjustment in expectations or limited options in their area of study. Some graduates had lost interest in their original subject area or developed a new interest and changed their focus. This may arguably have been a product of the educative process, work experience while studying or both. Krahn and Lowe (2000) found exposure to the realities of the working world tended to inject realism into the occupational aspirations of graduates, finding decreasing expectations were associated with work experience.

Some mature graduates provided similar explanations to those outlined above but the most common response from mature graduates was that they had experienced a positive change in their career expectations through enhanced confidence in their abilities, current value or employability. This is illustrated in the following comments from a mature female respondent -

> *Studying for my degree was a life changing/ enhancing experience. It has helped my employment chances and choices, but it is as a citizen of New Zealand that I feel overall much improved. Thus I am able to critically analyse issues and communicate this, along with suggestions and alternatives.*

This positive impact on expectations as a result of entering tertiary education should be examined further in relation to research suggesting many mature graduates have complex and self-actualising reasons for entering tertiary study, such as personal growth and changing life roles (Walters, 2000).

Employment Expectations

Reported mismatches between expectations and labour market realities have been found in several graduate studies with resulting implications for career satisfaction and turnover (Arnold and MacKenzie Davey, 1992; Sturges and Guest, 2001). However, overall in this study, graduates had relatively realistic expectations of likely employment outcomes. The few notable exceptions are discussed in more detail below.

Martin (2000) argued the extent to which graduates are aware of likely employment outcomes and have realistic expectations is associated with age, mature graduates being advantaged by greater market awareness than traditional aged graduates. While not conclusive, some evidence was found to support this view. In particular, a significant trend was found in the number of traditional aged graduates underestimating how long it would take them to find work. Mature graduates, who were less inclined to be as optimistic about their job search (13% expecting it may take longer than 9 months), fared well in comparison.

Overall, graduates were fairly accurate in their expectations of occupational level. While there were significant differences found in occupational levels, these did not trend in a particular direction, with some graduates faring better than they expected and others worse. The exception to this was graduates who had described themselves as very underemployed. These graduates were more likely to have entered employment at a lower occupational level than expected. While discussed in more detail later, relationships were also found to lower satisfaction levels with career outcomes and a greater intention to leave their current employment for this group of graduates. This supports the findings of Sturges and Guest (2001) that both the extent to which graduate expectations are met and the role experiences in the job are likely to influence organisational commitment.

Expectations of starting remuneration levels also appeared to be realistic or underestimated in light of figures reported for initial destinations by the NZVCC Graduate

Destinations Reports. In the UK, Purcell and Pitcher (1996) found graduate salary expectations to be realistic given the large supply of new graduates competing in the labour market. The average expected starting salary of traditional graduates in the present study was $30 698. At the national level, over 50% of graduates in recent NZVCC Reports (1999-2001) were earning more than $30 000. With all age groups included, the national average for 1999 graduates was $37 727, up from $36 901 for 1998 graduates. Mature graduates expected to earn more than traditional graduates ($46 000) although the difference in expectations was substantially reduced when those in full time employment while studying were excluded ($32 800). Actual remuneration levels reported within this study supported the legitimacy of this higher expectation from mature graduates.

RESEARCH QUESTION FOUR:

What is the nature of the transition process from education to work, in terms of the ease of transition and any turbulence or changeability in their early careers?

In a previous New Zealand study examining graduate outcomes, Cox and Pollock (1997) established that 38.4% of New Zealand graduates initially had difficulty finding work. Within the current study, 70% of graduates found employment within three months of beginning their job search and 80% had done so within 6 months. However, this statistic may hide a number of graduates who chose to remain in further study or travel before beginning their job search. For some of these graduates (17% were in continuing study at graduation), entering further study may have been a deliberate reaction to the perceived difficulties of finding decent employment as a new graduate with little experience as commented on by the following graduate -

> *I chose to study BSc (zoology) at Massey, and as a lot of people would think, this is purely because I am interested in this subject, not because of the money or job opportunities in the future. Which is why I'm currently studying MSc, to enhance my career prospects in the future. I did not believe that I could find a relevant, graduate level job upon graduation, as it*

is almost an understatement these days with fresh grads (particularly with a BSc zoology degree like me).

In addition to graduates continuing in their study, several academics have considered the implications of tight labour market conditions leading to a rise in non-standard work and an employer emphasis on short termism and flexibility, for the increasing supply of graduates to industry (Dugdale, 1997; Burke, 1998). Krahn and Lowe (2000) found amongst Canadian graduates, there had been a rise in individuals entering temporary and part-time positions.

Within the present study, at graduation, 7.7% of graduates were in part-time employment and 8% were in temporary employment. Furthermore, 31% of all graduates had experienced a period of temporary employment since graduation. Traditional graduates were more likely to have been in temporary employment and their explanations for this were predominantly that they needed the money (75%), thought it would provided valuable work experience (51%) and/or couldn't find permanent work (47%). Livingstone (1998) suggested one dimension of under-employment was involuntary reduced employment where part-time or temporary employment is a second choice alternative for individuals unable to secure full time employment. However, it must also be recognised that for some individuals, flexible modes of work may be highly compatible with other lifestyle commitments. Evidence of both these phenomena were found in the present study and appeared related to student age group.

For traditional graduates 4% were in part-time employment and 10.4% were in temporary employment at graduation. One year later, when most significant changes in labour market status had taken place, only 1.4% of traditional aged graduates were in part-time employment and the number in temporary employment had dropped to 5.5%. This may suggest that for a number of traditional graduates part-time and temporary employment had been second choice or temporary alternatives. It may also be indicative of the 'waiting-room effect', a term coined by

Batenburg and de Witte (2001) to the describe underemployment some graduates experience temporarily based on their relative inexperience in the workplace.

Examining the trends in part-time employment for mature graduates presented a somewhat different picture. At graduation 12.7% were in part-time employment and one year later this had held relatively constant at 11.4%. It is possible this reflected an inability of some individuals to secure more suitable employment. However, a number of mature graduates commented on their deliberate decision to enter part-time employment, suggesting this may be the more likely explanation for the steady number of mature graduates remaining in permanent part-time employment. Two examples of this are presented below -

> *I work as a public relations contractor in local government carrying out projects the organisation doesn't have permanent fulltime staff available for... I do this about 20 hours/week and care for my preschool children for the remaining time.*

> *Presently I only work part time as my son is still very young but I intend to be working full time in the next few years in the partnership. My degree has been a real asset and has enabled me to have a family, work part time and still earn good money.*

Permanent Employment

Overall, half of the graduates (51%) were in permanent employment at graduation, six months after most graduates had completed their tertiary study. Broken down by age, this represented 58% of mature graduates and 46% of traditional aged graduates. When graduates who had been working in full time employment while studying were excluded, the number of traditional aged graduates in employment remained constant, but there was a substantial change in picture for the remaining mature graduates. Just 28% had found permanent employment, with a further 19% were in permanent part-time employment. This suggests there may be at least two quite distinct groups within the wider category of mature graduates. Again this may be associated with the greater complexity of reasons for why mature graduates enter tertiary education (Walters, 2000; Egerton, 2001). Further research specifically

examining the circumstances of mature graduates in New Zealand should be carried out.

For all graduates however, as Connor and Pollard (1996) found in their UK study, the number of graduates in permanent employment improved substantially over time. One year after graduation, or 18 months after most graduates had completed their qualification, 65.5% were in permanent full time employment and a further 10% were in fixed-term or permanent part-time employment, both of these being regarded as other forms of stable employment.

In New Zealand, data on graduate destinations is collected on an annual basis. This survey is posted out to graduates approximately six months after they complete their course of study (NZVCC University Graduate Destinations, 2000). Within the current study, most graduates had completed their tertiary study 6 months prior to graduation. Therefore, the labour market status of graduates at this time would be comparable with the responses received for the NZVCC Graduate Destinations reports. Given the significant changes and improvements in the labour market position of graduates within the first year following graduation, raises questions regarding the appropriateness of collecting graduate destinations so soon after their course completion.

Changeability or Turbulence in the Early Graduate Career

Some graduate research (Purcell and Pitcher, 1996; OECD, 2000) suggests the transition from study to work has been complicated by a tendency of graduates to flounder or experience turbulence when entering the job market, drifting in or out of the labour market or between jobs. Connor and Pollard (1996) found a significant majority of graduates in their UK study, experienced very little changeability in their early careers and that mature graduates encountered even less career turbulence than traditional aged graduates. Evidence from this study supported this finding. A significant 70% of mature graduates had no changes in career state in the first 18 months following graduation and almost half (48%) of traditional aged graduates

were the same. Just 9% of mature graduates had experienced 2 or more changes, while interestingly a slightly higher 17.5% of traditional aged graduates had.

However, Woodley and Brennan (2000; Lau and Pang, 1995) suggested while there may be little turbulence in terms of moving in and out of the labour market, job change itself can be very common. Within the present study over a third of all graduates (36%) had held two or more permanent jobs since graduation. This was found to be associated with length of time in the job market with 45% of 1998 graduates having held two or more jobs after 3 and a half years in the labour market. Given this sizeable group of graduates moving between jobs within a relatively short space of time, research examining the shift between first and second or third jobs, along with the explanations and motivations behind this, could yield some interesting results.

RESEARCH QUESTION FIVE:

What do graduates identify as the main reasons for their labour market experiences other than stable employment?

Smith et al (2000) argue a perspective emphasising the returns of educational investment views entering employment or further education as positive outcomes and unavailability or unemployment as negative outcomes. In response to this, the current study sought to examine the rationale or explanation behind graduates who were in career states other than employment. These included being not available for employment, further study and unemployed.

Not Available for Employment

It is assumed that one highly probable explanation for a significant number of non-responses to this survey were the result of overseas travel by traditional graduates in particular. Therefore, responses to this section may not reflect overall patterns of

unavailability for graduates. However, 1 in 5 graduates within the present study had spent time unavailable for employment.

Differences in explanation for this and the average length of unavailability differed quite significantly according to student age group. Traditional graduates had taken an average of 5.7 months out and 3 out of 4 indicated this was for the purpose of travel. This was similar to the overall finding in the UK study of Connor and Pollard (1996), where 63% had taken time out to pursue travel or leisure activities. Reasons offered by mature graduates, who were unavailable for employment for an average of 9 months, were far more varied. While 44% had indicated they took time out to travel, 42% had also taken time out to care for children or dependents and 14% due to age. Once again, this highlights the diversity of outcomes in relation to student age group and personal circumstances, offering further evidence to justify research specifically examining the outcomes of mature graduates.

Further Study

Over 50% of graduates had continued in some form of education since graduation and interestingly, this was unrelated to age. It is important to note that while some of these graduates had remained in full time study, many others had entered some form of employment as well. Krahn and Lowe (1991) found predominant reasons for returning to education were highly job or career related and reflected established perceptions of their graduate respondents that university degrees could no longer guarantee a good job. Likewise in the current study, the most common reason for entering further education was to enhance career prospects in a particular field or job or to enhance career prospects in general. The numbers continuing to up skill through formal education despite holding a bachelor degree, supports other research suggesting the value of educational credentials are declining, either through increased supply of graduates or employers raising entry requirements (Coffield, 1999; Connor, 1997).

Groot and Hoek (2000) argue that where job competition occurs due to an increase in highly educated labour, others are required to improve their educational level, simply to defend their current income position because if they do not, others will and they may find their current job no longer available to them. Therefore graduates' continuing to up-skill supports the ideal of lifelong learning and could be argued to be a very positive graduate outcome. However, it may be important to consider more closely the extent to which graduates are engaging in this process out of a sense of necessity or obligation. If the primary motivation is enhanced career opportunities, then the finding of Connor (1997) in the UK is troubling and could be investigated further in New Zealand. Her study of employment outcomes for post-graduates found they were increasingly being recruited alongside first-degree holders, at times, for the same rates of pay.

Unemployment

While 23% of graduates indicated they had been unemployed at some point since completing their study, this was a very temporary predicament for most graduates, with two thirds of these graduates having been unemployed for less than 6 months. Again, this may be an indication of the 'waiting room effect' for new graduates in the labour market (Batenburg and de Witte, 2001).

Of those who had experienced unemployment, a significant number were not prepared to find work in any geographic location. In particular, just one third of mature graduates were prepared to move anywhere. There was correspondingly found to be a significant relationship between the mobility of graduates and their length of time in unemployment. A 41-year-old male from Palmerston North suggested the factors hindering his search for suitable employment included –

> *...Limited opportunities in a provincial city. Limitations of a BA degree in today's climate for mature graduates.*

Overall, however, unemployment for most graduates in this study was a short-lived experience, if it was experienced at all and sustained unemployment was rare.

Consequently, in comparison with the UK study of Connor and Pollard (1996), New Zealand graduates fared much better in this respect. In their study, over half the graduate sample had experienced unemployment, with 20% having been unemployed for longer than 6 months.

RESEARCH QUESTION SIX:

What are the current employment circumstances of the graduates in stable employment, including the extent and nature of any underemployment?

In the current study, most of the graduates who had entered stable employment were in permanent fulltime work. Despite an increasing emphasis on flexibility and short termism over job security by many employers (Counsell, 1996; Burke, 1998), just 10% of graduates were on fixed-term contracts. The extent to which this has increased or decreased in the 1990s for New Zealand graduates is not known. It was interestingly to note however, that graduates on fixed term contracts were more likely to live in the large urban centres.

Organisational Size

Also significant in relation to geographic location was the size of the graduates' employing organisations. It was found that the 54% of graduates employed in large organisations (100+ employees) were also more likely to live in large urban areas. According to Statistics New Zealand, in 2001, 45% of the New Zealand workforce was in organisations employing more than 50 employees. Within the current study, this accounted for a disproportionate 64% of the graduates. Belfield (1999) found that in the UK, graduates were also disproportionately employed in large organisations and directed most of their employment search towards these organisations.

Within New Zealand, almost 30% of graduates (27.3%) were employed in small organisations, defined by Cameron and Massey (1999) as having between 5 and 49

employees. While it is not possible to comment on whether this is a particular trend in graduate employment, some evidence was found that the employment conditions and career satisfaction of graduates differ according to organisational size.

In particular organisational size appeared to have implications for salary levels. Disparities were found in relation to salary brackets based on organisational size with those in small and micro organisations more likely to earn less than graduates in organisations with more than 50 employees. Furthermore, in assessing the career satisfaction of graduates so far, graduates in small organisations (5-49 employees) were less satisfied than those in medium or large organisations for three dimensions of career satisfaction. These included pace of career progress, opportunities available, and overall career development. Both these findings support the argument raised by Belfield (1999) that small organisations may lack the resources to either develop and utilise graduates effectively or offer competitive remuneration rates in relation to large organisations. These findings may have important implications for small organisations within New Zealand looking to attract high calibre graduates and would be an area worth researching in more depth.

Industry Sector

Several international studies have found that graduates are predominantly gaining employment in service industries, reflecting the shift from agricultural or industrial based economies to service and knowledge centred ones (Lowe and Krahn, 2000; Fleetwood, 2000; Batenburg and de Witte, 2001). Previous research in New Zealand has established similar trends amongst New Zealand graduates (Cox and Pollock, 1997) and the current study was no exception. More than 70% of graduates who had entered stable employment were employed in the service sector.

In the UK, Purcell and Pitcher (1996) found that students largely intended to apply for positions relevant to their field of study. There appeared to be an overall tendency for graduates in this study to enter industries reflecting their area of study although this trend was seemingly less evident for science graduates. BA graduates

were most strongly concentrated in Education and Health and Community Services Industries. BBS graduates, not surprisingly, were best represented in property and business services and finance and insurance. Nearly 30% of science graduates had found work in the agricultural, forestry and fishing industry but another 20% were employed in property and business services. More in depth analysis would be required to probe to what extent eventual jobs reflected the specific subject area university graduates had studied.

Batenburg and de Witte (2001) in examining graduate outcomes along three labour market segments, namely, commercial, technical and care specialisations found commercially trained graduates were in greatest demand, and that employees with a technical or care specialisation suffered most from credential inflation or underemployment. However, in the current study, those experiencing credential underemployment did not appear to be grouped according to their study background or industry sector.

Occupational Level

The occupational level at which graduates are employed, has been used as an indicator in several studies to investigate the number of graduates entering graduate level employment (Connor and Pollard, 1996; Purcell and Pitcher, 1996; Cox and Pollock, 1997). Within the current study, this included the top three levels of the New Zealand Standard Classification of Occupations (NZSCO) including Legislators, Administrators and Managers, Professionals, and Technicians and Associate Professionals. This final category is more indicative of entry-level graduate positions. Overall, 70% of graduates in stable employment reported being in one of these three occupational groupings, with the highest proportion (35%) being in professional jobs. This was lower than the 78% of graduates employed in graduate positions in a similarly designed UK study (Connor and Pollard, 1996) in the early 1990s.

A higher proportion of traditional graduates (30%) were in technician and associate professional roles compared with mature graduates (17%). However, when those who had been employed in full time work while studying were controlled for, there was a clear disparity in outcomes for mature graduates. Those who were in full time work while studying were more likely to be in the Legislators, Administrators and Managers occupational grouping, while more of those who had not were in technician and associate type roles (25%). Both of these findings lend weight to the argument that technician and associate professional roles are most likely more entry level in nature.

In addition to those graduates employed in the top three occupational levels, 30% of graduates in stable employment were in lower occupational groupings defined as traditionally non-graduate roles. A more detailed discussion of the findings concerning those graduates experiencing underemployment or under-utilisation follows.

Underemployment

The range and variety of jobs into which graduates are moving is becoming increasingly diverse and this, in turn, makes defining what is and is not a graduate position more complicated (Fallows and Stevens, 2000). Therefore, in order to assess the appropriateness of classifying those graduates in lower occupational groupings as being in non-graduate positions, other questions relating to aspects of underemployment were also examined. Within the current study, it was found that of those graduates who had entered existing positions, the majority of graduates entering lower occupational groupings had filled positions previously held by non-graduates. Conversely, the graduates in the three higher occupational groupings were more likely to report their job had previously been held by a graduate. This corroboration strengthens the argument that occupational level is a useful indicator of the graduate nature of employment positions.

Where it may once have been acceptable to define a job as requiring a graduate, based on the level of education required by an employer, Green et al (2000) argue it is not this straight forward. They suggest that as the supply of graduates in the labour market has increased, some employers have raised the qualification requirements of traditionally non-graduate positions despite little or no change to the skills required to perform the job. Support for this observation was found within the present study when respondents were asked to define the graduate nature of their job in response to several statements. Almost half of the graduates employed at lower occupational levels, suggested their job was in no way a graduate position and, while only 14% indicated the work required graduate ability, 44% still indicated their degree was helpful in getting the job. These graduates are indicative of those in credential underemployment according to Livingstone's six dimensions of underemployment (1998).

Within the present study, respondents were asked to identify the extent to which they had experienced underemployment in their job and describe the ways in which they had done so. The following comments highlight the position of three graduates experiencing credential underemployment. The first graduate, with a BSc in Computer Science, was employed in general labour for a flower exporter, while the second, with a BA in Psychology was carrying out database maintenance.

> *'Most of the job could be done by a well trained monkey. It was absolutely dead boring, a lot of the time. My creativity and initiative were completely stifled'*

> *'A retarded chimp could manage day-to-day systems. No input into decision making. Ideas ignored. Any sort of strategic planning seems to be ignored.*

However, perhaps most poignant of all is the following comment:

> *'I have an MA – I am overqualified for data entry work and have the potential to earn more than $13 an hour doing menial, monotonous jobs. I have wasted 5yrs and got into serious debt for a degree that won't even get me a job – my part-time work has been far more beneficial and is the only thing that secured me employment. Bottom line – tertiary education is overrated'.*

Livingstone (1998) suggests the range of ways in which individuals experience underemployment complicates the process of identifying wasted ability in the workplace. Dimensions of underemployment such as unemployment, involuntary reduced employment or credential underemployment are more easily quantifiable. However, Livingstone (1998) suggests that while performance or subjective underemployment may not be officially defined as underemployed, for statistical purposes, they are still valid forms of underemployment experienced by some.

Strong evidence was found to support these categories of underemployment within this graduate sample. While graduates employed at lower occupational levels were most likely to describe themselves as very underemployed (40%), 50% of all respondents described themselves as experiencing some level of underemployment in their job and this included graduates from each of the three top occupational graduates. Within the present study, the most common type of response emphasised the lack of challenges for graduates in their work or their inability to use their knowledge or skills.

> *'Capable of so much more than current work. Current work is mostly data entry, so it doesn't use my knowledge/skills'.*

> *'Am involved in some monotonous, no-brainer tasks that anyone could do and don't use much of my degree'.*

> *This job doesn't offer the challenges I was made to believe it would offer. High level of administration work was added after I started.*[1]

As previously mentioned, Batenburg and de Witte (2001) have highlighted the notion of a waiting room effect where graduates are exposed to underemployment temporarily as a result of their relative inexperience. However, within the present study, the only measure of underemployment to show any relationship to prior work experience or age was the occupational level of graduates and even here, this was more likely to describe differences in distribution within the three top

[1] See Appendix D for a complete list of graduate comments concerning experienced underemployment.

occupational groupings, rather than differences between those in traditionally graduate or non-graduate occupations. There was also no significant differences in underemployment experienced, subject to their graduating year, 1998 graduates having been in the labour market two years longer than 2000 graduates. However, this concept, which would be best examined within a longitudinal study, was illustrated perfectly in the following comment from a 23-year-old female 2000 graduate who had spent 6 months in unemployment and 6 months in temporary employment before obtaining work as a Local Government, 'Land Management Officer', enforcing weed control.

> *As soon as I had finished my study I thought I'd get a job straight away – way before graduation so I got disappointed. I think I would have handled it better if I just took some time out and didn't feel the need to get a job straight away. There was a big "catch 22" situation where I really wanted a job but didn't have the experience... so I couldn't get a job.*

RESEARCH QUESTION SEVEN:

To what extent are graduates satisfied with their overall study choices and career development?

In line with findings from other research examining important graduate expectations, including opportunities for career advancement (Purcell and Pitcher, 1996; Lau and Pang, 1995) and training and career development (Arnold and MacKensie Davey, 1992), five dimensions of career satisfaction were investigated. While the relationship between the size of the organisation graduates were employed in and their career satisfaction so far have already been discussed, other variables were also found to be related to the level of career satisfaction graduates had experienced.

As might be anticipated, within the current study, those who had not entered stable employment were less satisfied with the pace of their career progress. In particular, those in temporary employment were opportunities available and overall career development as well. This adds further weight to the notion of involuntary reduced

employment where temporary work is a second choice alternative (Livingstone, 1998). The other group to show lower levels of career satisfaction overall, were those in lower occupational levels, or traditionally non-graduate positions.

Within the current study, the future career expectations of graduates were examined in relation to graduate levels of career satisfaction. This was in light of research suggesting both the extent to which graduate expectations are met and the nature of role experiences such as career development on the job, are likely to influence organizational commitment (Sturges and Guest, 2001). Evidence was found which tentatively supports this research.

Graduates who had experienced no underemployment in their work were more likely to be expecting to remain in their same job. This same group having reported higher career satisfaction overall. On the contrary, a significant proportion of graduates with lower levels of career satisfaction, reported they were expecting to change organization within the next year. In addition graduates stating they expected to be unavailable for employment in the next year also had lower career satisfaction levels, many of these graduates possibly intending to travel. While more rigorous research could be developed to investigate these reported trends, these findings have some important implications for organizations employing graduates. While graduates are expected to be transient in their early graduate career, and evidence regarding the number of job changes some graduates had experienced already supports this, employers may have a role to play in providing career opportunities and development for graduates if they wish to retain them.

LIMITATIONS

As with all research, this study was subject to certain limitations related to the sample, methodology and design of the study. The following section discusses each of these issues in turn.

Limitations of Sample

It was decided to restrict the population to Massey University graduates for pragmatic reasons such as the availability of graduate contact information and the need to limit the scope of the study. However, this presented implications for the generalisability of findings to New Zealand graduates overall. In particular, as a distance education provider, Massey University has a high number of mature and extramural graduates with a distinctive student profile. However, while certain qualifications not offered at Massey University were inevitably excluded, it was felt that as a large New Zealand university, Massey University offered the potential to gain at least some initial picture of how New Zealand graduates fare in the labour market following completion of a Bachelor degree.

The College of Education was excluded from the study both because of the unique nature of this area of study and the need to limit the survey size. Any degree with less than 100 total graduates over the three years captured within this survey was excluded. While these courses may have unique experiences quite apart from the general findings of this study, the aim of providing an overall picture of graduate outcomes took precedence over the ability to investigate trends for specialist degrees.

The decision was made to contact a large sample of the population for several reasons. Traditional aged graduates in particular were recognised for being a highly transient group, especially while establishing their career. Also, despite constant updating of graduate addresses by the Alumni Office, it was not known how many graduate addresses remained current. Also, the data for the 2000 graduates, at the time the sample was generated, had not yet been formally screened for accuracy and entered into the graduate database by the Alumni Office. This resulted in a sample size of 629, with 624 useable survey responses. While this was a sizable number, this represented a low response rate in relation to initial sample size (2487 graduates).

Cooper and Emory (1995) argue that the major weakness of mail surveys is non-response, however mail surveys with a return of about 30% are often considered satisfactory. This was almost achieved in the present study with a response rate of 28%, however this does raise questions regarding the circumstances of the large number of non-respondents. Where possible, analysis was carried out to examine the representativeness of the respondent sample with, in particular, the overall student and graduate populations. This was available both at the national and university level. Another explanation for the high level of non-response may have been the length of the questionnaire. The survey booklet contained 15 pages and 60, predominantly closed, questions. It was anticipated this may negatively impact on completion rates, however it was decided the potential insights and benefits likely to be realised by the use of a more extensive questionnaire out-weighed any potential non-response bias.

Limitations of Approach

Given the lack of research on this area in New Zealand, this study was largely exploratory in nature, with the stated intention of developing an overall understanding of the transition to work and early career development of New Zealand graduates. In order to do so, it was desirable to cover a wide range of factors considered likely to influence the success of this process for graduates. The main limitation of such an approach was the inability to infer or explain responses of specific graduates beyond their responses to the survey questions. While this is a recognised limitation of the survey methodology (Gardner, 1976), it still created frustration at times, particularly with questions that failed to capture the intended information. This necessarily feeds into a discussion of survey design.

Limitations of Survey Design

The main limitation of survey design was attributed to the use and adaptation of a similar study carried out in the UK (Connor and Pollard, 1996). The intention was to adopt the same approach to investigating graduate outcomes in order to enable future comparative analysis. While this provided a useful template it was necessary

to adapt questions in order to be applicable to the New Zealand or Massey University context. There was also some divergence in objectives, which necessitated the development or alteration of questions in some instances.

Consequently, the response format for some questions, while providing useful and interesting information, was limiting in the level of statistical analysis that could be performed. Many of the results were largely descriptive in nature. However, given the overall aim of the study to provide a broad picture of expectations and outcomes for graduates in New Zealand, this was not viewed as so much of a restraint for the present study as for future uses of the data, where particular issues might be examined in more depth.

Given the post-hoc, retrospective nature of the survey, questions regarding expectations were limited in their reliability given the influence of actual events on memories of expectations. Similar limitations existed for the recollection of time periods since graduation as well. Ellis (1994) suggests the ability of participants to recall past events is strongly influenced by time since the event and the novelty or importance of the event. While the accuracy of memories vary according to individuals (Ellis, 1994), this may have had particular implications for 1998 graduates, as some had been in the labour market for almost 4 years since completing their tertiary education. The most interesting and conceptually tidy approach to examining the relationship between expectations and outcomes would be to conduct a longitudinal study following the same cohort out into industry and exploring their outcomes and experiences over time. However, such an approach was not possible for the current study given time and financial constraints. Within the current study, it was the desire to draw some conclusions regarding the influence of time on labour market outcomes, which lead to the inclusion of three consecutive cohorts in the graduate sample, each with varying lengths of time in the labour market following graduation. These conclusions are the subject of the next chapter along with a summary of the future opportunities for research that emerged from this study.

CHAPTER 8: *Conclusions*

This exploratory survey sought to develop a broad picture of the graduate transitions from study to work within New Zealand. In order to develop our collective understanding of this process from the perspective of the individuals entering tertiary education and their expectations, seven research questions were investigated[1].

The upsurge in individuals entering tertiary education and the reported difficulties of some graduates in finding relevant, graduate level employment has been the focus of research for a number of academics internationally over the past two decades. This particular body of research has wide reaching implications give the substantial time and financial investment of both societies and individuals in tertiary education.

Within New Zealand, little was known about graduate expectations and outcomes beyond the graduate destinations surveys conducted annually by the New Zealand Vice Chancellors Committee. While useful, these reports provided information on immediate destinations only. In light of the literature suggesting graduates encounter turbulence and changeability in their early career, it was decided to carry out a study examining graduate outcomes over a longer period of time. The UK study of Connor and Pollard (1996) was adapted to the New Zealand context and used to survey Massey University graduates from three consecutive cohorts (1998 – 2000).

Useable responses were received from 624 graduates distributed evenly across the three graduate cohorts. Analysis of the data revealed some interesting trends, which shed light on the experiences of New Zealand graduates in relation to

[1] See Chapter 4.

predominantly international research in the area. The key findings from the research are highlighted below along with their implications for practice and future research.

QUESTION 1: TRENDS IN TERTIARY PARTICIPATION

Distance learning and open access to tertiary education have encouraged the participation of mature graduates (25+) in tertiary education. This group of graduates had distinctive motivations and experiences, in comparison with traditional aged graduates. Amongst mature graduates themselves, those engaging in full time employment while studying represented a sizable group of respondents who experienced highly favourable employment outcomes. Many of the other findings within the current study were influenced by this underlying variable of student age. Research examining the particular motivations, expectations and experiences of mature graduates could provide useful for both tertiary education providers and those interested in the growing number of adults either returning to or entering education in latter life phases.

Strong evidence was found to support research indicating that the worlds of study and work are increasingly blurred. Flexibility introduced into the tertiary education system, catering to individual needs in delivery and mode of study, may have facilitated this. The vast majority of graduates had paid work experience prior to study and many had continued in some form of employment while studying. The implications of this balancing act for both educational attainment and work performance could be the focus of some interesting research.

Over half of the respondents in this survey (53%) had engaged in further formal education following their degree. This raised important questions concerning whether this reflects the declining value of the bachelor degree within the labour market or the instilling of a culture of lifelong learning. The overwhelming explanation for such activity was to enhance career prospects, lending weight to the former argument. The extent to which participation in continuing education is self-

initiated or employer initiated and to what extent this does result in improved career opportunities would be worthy of further investigation

QUESTION 2: INFLUENCES ON STUDY CHOICE

Evidence suggested that traditional aged graduates in particular were more inclined to select their course of study out of an interest in or aptitude for the subject rather than on the basis of likely employment opportunities. The motivations for entering tertiary education at all and at what stage graduates turn their attention towards employment outcomes could be investigated further. Responses in relation to changing career expectations while studying tended to suggest that employment outcomes for traditional graduates in particular were more likely to become important while studying rather than prior to entry.

QUESTION 3: EMPLOYMENT EXPECTATIONS

Overall, graduate expectations of employment outcomes were realistic although traditional aged graduates showed a tendency to underestimate how long it would take them to find work. While this is a pleasing indication of labour market awareness in New Zealand graduates, the most appropriate and interesting way to thoroughly investigate the relationships between graduate expectations and outcomes would be to conduct a longitudinal study following the same cohort of graduates out of their final year of tertiary study and into industry. This would reduce the chance of possible bias associated with recalling expectations after the event has occurred.

QUESTION 4: TRANSITION PROCESS

The labour market outcomes of graduates were found to improve over time within the first year following graduation. 51% of graduates were in permanent employment at graduation. One year later, 66% of graduates reported being in permanent employment and a further 10% were in fixed term positions of more than a year or permanent part-time employment. It was also found that 70% of

graduates found employment within 3 months of beginning their job search and 80% within 6 months.

However, a proportion of traditional aged graduates (16%) began their career in temporary or part-time positions. Explanations for entering temporary employment and the significant decrease in traditional aged graduates in these forms of employment supported the theory of a 'waiting room effect' where graduates experience temporary underemployment due to their limited experience in the labour market. Periods of unemployment experienced by 23% of the respondents were also indicative of a temporary waiting room effect, with unemployment for two thirds of graduates lasting less than 6 months.

This waiting room effect for new graduates may well mean time spent in lower level occupations is also temporary, although no specific evidence was found to support this within the present study. How long graduates should be expected to endure non-graduate work in order to gain suitable experience is questionable. Furthermore, Borghans and de Grip (2000) argue that the more people accept graduate positions below their educational level, there are flow on effects for others in society with lower educated who must then accept jobs beneath their skill level. They argue that this creates a bumping down or crowding out effect within a labour market. The extent to which this is a potential issue within New Zealand could be investigated in research specifically examining the implications of underemployment and credential inflation.

An examination of turbulence or changeability in the early graduate career suggested the trend towards movement between jobs was more prevalent than movement between career states. Over a third (36%) of graduates had held two or more jobs since graduation. This was also associated with length of time in the labour market, with 45% of 1998 graduates having held two or more jobs in three and a half years. This and the significant changes in career state over the first year following graduation may have important implications for the current reporting of

graduate destinations within New Zealand. It is suggested that a review be undertaken to examine the feasibility of, in particular, introducing alternative time frames for the collection of information on graduate destinations within New Zealand. However, instigating a longer delay between completions of study and the review of graduate destinations would also rely on universities continuing to improve their maintenance of accurate graduate contact details and means of access to graduates.

QUESTION 5: LABOUR MARKET EXPERIENCES

While reasons for taking time out from the labour market were quite varied for mature graduates, three out of four traditional aged graduates had taken time out to travel. Given that only graduates with a New Zealand address were contacted and just a few overseas graduates were forwarded the survey by family and responded, this study does not represent the complete picture of graduate destinations. Other New Zealand research has focused on the significant number of recent graduates who choose to leave New Zealand at least temporarily and spend time abroad. This should be borne in mind when interpreting these or other research findings examining the outcomes of traditional aged graduates in particular.

QUESTION 6: EMPLOYMENT EXPERIENCES

Organisational size was found to be an important factor in the remuneration levels and career development and opportunities of graduates. Those in small New Zealand organisations (5 – 49 employees) tended to fare worse on these criteria than those in organisations with over 50 employees. Both these findings tend to support the contention of Belfield (1999) that small organisations may lack the resources to either develop and utilise graduates effectively or offer competitive remuneration rates in relation to large organisations. These findings may have important implications for small organisations looking to attract high calibre graduates. Given the greater intention of less satisfied graduates to look for employment elsewhere may also be a concern for smaller organisations, less able to absorb recruitment or training costs.

Evidence was found to support the existence of the five dimensions of underemployment relevant to this study according to Livingstone's work (1998). Occupational level was found to be a valid indicator of graduates experiencing underemployment. Half of the graduates surveyed indicated they had experienced underemployment to some extent, with 20% indicating believing they were very underemployed. Comments reflecting experiences of credential underemployment were more closely associated with occupational level and positions previously held by non-graduates or not requiring graduate ability. However, performance and subjective underemployment were most commonly reported by graduates with many making reference to their inability to use the skills and knowledge gained through their study. This provides some preliminary findings, which a study specifically designed to examine levels of underemployment across a range of qualifications, and levels of experience could develop further. It is suggested such a study would make an excellent contribution to current body of knowledge regarding the functioning of the New Zealand labour market.

QUESTION 7: CAREER SATISFACTION

Overall graduates appeared relatively well satisfied with their career outcomes. About 20% of respondents tended to indicate a distinct lack of satisfaction for some or all of the dimensions examined. Differences in level of reported career satisfaction were found to be associated with the size of the employing organisation, the current employment status and the occupational level graduates were employed at. Those in small organisations or less advantaged positions tended towards lower levels of career satisfaction.

Correspondingly, those with lower levels of career satisfaction displayed a greater tendency towards thinking about leaving their current employment, either to work for a new organisation or take time out of the labour market. The extent to which graduates had experienced underemployment in their jobs also influenced the likelihood of expecting to stay with their current organisation or become employed elsewhere. Therefore, it is suggested that providing opportunities for development

and career advancement should be important considerations for employers looking to retain their recent graduates.

OVERALL SUMMARY

This study set out to improve understanding of the transition process from study to work and the resulting outcomes for New Zealand graduates. In achieving this, a valuable contribution has been made to the existing body of literature on graduate outcomes. In particular, this study reaffirmed some of the findings from international research within the New Zealand context.

There are a number of practical implications for key stakeholders in education within New Zealand, including employers, educators and graduates themselves. In particular, this study raises particular issues regarding the current approach, the timing in particular, for the collection of graduate destinations data within New Zealand. It is recommended that the New Zealand Vice Chancellors Committee revise and lengthen the time between the completion of study for graduates and the collection of data on graduate destinations. This would avoid the initial period of turbulence and possibly waiting room experiences of graduates in the first year following graduation and provide a more stable indication of graduate outcomes. This research also provides a valuable bank of data from which further analysis and conclusions can be drawn. This is likely to be of particular use to Massey University in understanding and responding to the differences in expectations and outcomes for distinct student groups.

Furthermore, by establishing some preliminary trends in early graduate employment outcomes, it has highlighted a number of areas for further research. These include researching into: -

- The unique circumstances facing different types of mature graduates in light of the distinctive motivations, expectations and experiences surfaced in this study.

- The drivers behind the high level of graduates engaging in further study. Whether this is self-initiated or employer initiated and/or indicative of a love of learning or perceived need to remain competitive in the labour market are all questions such research could explore.

- Levels of underemployment across occupational and qualification levels. This would make a valuable contribution to current knowledge of labour market functioning and skill utilisation within New Zealand.

- The role of organisational size in career satisfaction and progress. This would be highly relevant given the high proportion of small organisations in New Zealand. In particular employers of smaller organisations might benefit from understanding the advantages and limitations they offer to graduates and how they might be best attracted or retained.

- How graduates transition and the choices and dilemmas they face in their early career through a longitudinal study which follows a student cohort out of education and into the labour market

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APPENDIX A

INFORMATION SHEET

October 2001

Dear Graduate

RECENT GRADUATES AND THE LABOUR MARKET

As a Massey University graduate, you are invited to take part in this survey of the employment experiences of recent graduates. Questionnaires are being sent to those who graduated from Massey University with a Bachelor Degree in 1998, 1999 or 2000. This research is being conducted by Allana Coulon, with the support of colleagues from the Department of Human Resource Management and the Alumni and Friends Office. This first in-depth study of former students will also contribute to the completion of a Master of Business Studies.

It is generally accepted that one of the most significant reasons people choose to study is to improve their employment opportunities. However, today's competitive business environment, marked with restructurings, downsizings and stream-lined global enterprises, has resulted in western nations around the world reporting that their graduates are struggling to find relevant, graduate level employment upon graduation. Consequently, this study has been developed to help us better understand what is happening to graduates in New Zealand and more specifically, from Massey University.

The questionnaire will take about 30 minutes of your time to complete and can be returned directly to Massey University in the reply-paid envelope. In order to protect anonymity, the Alumni and Friends Office of Massey University has been directly involved in the selection of participants and the mail out of this questionnaire.

We would also like to point out that:
* your participation in this study is entirely voluntary;
* you may decline to answer any particular questions;
* it is assumed that filling in the questionnaire implies consent.

Should you have any questions, please contact myself on (06) 530 5799 extn 2366 or email A.Coulon@massey.ac.nz. Alternatively, you are welcome to contact my supervisor, Glyn Jeffrey on extn 2376 or email G.B.Jeffrey@massey.ac.nz. If you would like a summary of the research findings when it is concluded, please phone the secretary of the Department of Human Resource Management on (06) 350 5799 extn 2362.

Yours sincerely

Allana Coulon

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APPENDIX B

GRADUATE QUESTIONNAIRE

RECENT GRADUATES AND THE LABOUR MARKET:

The expectations and experiences of Massey University graduates.

SECTION 1: YOUR PERSONAL DETAILS

The information provided here, as in the rest of the questionnaire will be treated in the strictest confidence and the data, once collected will become and remain anonymous.

Please tick the appropriate response for each question or provide exact details in the boxes provided.

(1) Please indicate your gender.

a.	Male	
b.	Female	

(2) Age (in years) on your last birthday. ☐ Years

(3) Please indicate your ethnic origin.

a.	New Zealand European	
b.	New Zealand Maori	
c.	Pacific Island	
d.	Asian	
e. (i)	Other *(please specify)*	

(4) Where was/is your main residence?

(Please state town/region)
Before Massey University...

(Please state town/region)
Currently...

(5) What was the highest level of qualification you gained before entering Massey University?

(Please specify)

SECTION 2: YOUR EDUCATION

In this section we are interested in your experiences before, and during, your time at Massey University.

Please tick the appropriate response for each question or provide exact details in the boxes provided.

(6) Which year did you graduate (with your Bachelor's degree)? ☐ Year

(7) **What was the degree and major (if applicable) with which you graduated?**

Degree [ ] **Major** [ ]

ii) How many years did it take to complete your degree? [ ]

iii) Use the following table to classify yourself as a student.
(Please tick all that apply)

a.	Internal Student	
b.	Extramural Student	
c.	Part-time	
d.	Traditional Student (18 – 24 years)	
e.	Mature Student (25+ years)	

(8) **What was the average grade over your degree?** *(Please circle only one)*

A+ A A- B+ B B- C+ C

(9) **Why did you choose to study at Massey University?**

(Please tick all those that apply)

a.	Location	
b.	Extramural Offerings	
c.	Had subject (or combination) that I wanted to study	
d.	Facilities	
e.	Positive attitude towards mature students	
f.	Reputation	
g.	Recommendations of others	
h. (i)	Other (please specify)	

(10) **Why did you choose to study your particular degree course?**

(Please tick all those that apply)

a.	Interested and/or good at that subject	
b.	Wanted to try something different	
c.	Job placement (paid work for less than one year)	
d.	Thought it would provide job opportunities	
e. (i) (ii)	Other reasons (please specify)	

(11) **Did you have any of the following periods of work experience before you came to Massey University?**

(Please tick all those that apply)

a.	Voluntary/unpaid work (full or part-time)	
b.	Vacation work	
c.	Paid part-time work (i.e. Day, weekend, evening)	
d.	Paid full-time work for less than 1 year	
e.	Paid full-time work totalling between 1 & 5 years	
f.	Paid full-time work totalling more than 5 years	

(12) **i) Did you have any periods of work experience whilst at Massey University?**

(Please tick all those that apply)

a.	Voluntary/unpaid work (full or part-time)	
b.	Vacation work	
c.	Weekend, evening or other part-time paid work	
d.	Full time paid work incl. during term time	
e.	Work placement	
f. (i)	Other type of work experience (please specify)	

ii) If you worked during term time, on average, how many hours a week did you work?

☐ Hours

(13) **How well, if at all, do you feel that your degree programme and/or your time spent at Massey University developed your skills in the following areas?**

(Please circle the most appropriate responses)		Little or no change to existing skills	Improved existing skills	Significant improvement to existing skills	Developed new skill
a.	Oral communication	1	2	3	4
b.	Written communication	1	2	3	4
c.	Presentation Skills	1	2	3	4
d.	Numeracy	1	2	3	4
e.	Computer Literacy	1	2	3	4
f.	Teamwork	1	2	3	4
g.	Leadership	1	2	3	4
h.	Problem solving	1	2	3	4
i.	Creative thinking	1	2	3	4
j.	Decision making	1	2	3	4
k.	Time management	1	2	3	4
l.	Business awareness	1	2	3	4
m.	Other *(please specify)*				
i)	_____	1	2	3	4
ii)	_____	1	2	3	4
iii)	_____	1	2	3	4

(14) **Which skills (those listed above or any others) do you feel have been, or would have been, most useful to you in your career?**

a. The most useful skill
b. The next most useful skill

(15) **Please indicate your level of debt on leaving Massey University.**

(Please tick the appropriate box)

a)	None		
b)	Less than $2000		
c)	$2001 to $5000		
d)	$5001 to $10 000		
e)	$10 000 to $15 000		
f)	$15 001 to $20 000		
g)	$20 000 to $30 000		
h)	$30 001 to $40 000		
i)	$40 001 and over		

SECTION 3: CAREER EXPECTATIONS

In this section we are interested in what your career expectations were prior to, and immediately following, your graduation from Massey University.

Please tick the appropriate response for each question or provide exact details in the boxes provided.

(16) (i) **Did your career expectations change while you were at Massey University?**

(Please tick only one)

a.	Yes	
b.	No	

(ii) If you answered yes to question 16, why did they change?

(17) **Once you started looking for a position, how long did you expect the job search to take?**

(Please tick the most appropriate box)

a.	Less than 1 month	
b.	1 – 3 months	
c.	3 – 6 months	
d.	6 – 9 months	
e.	More than 9 months	

(18) **How many positions did you expect you would have to apply for in order to secure one?**

(Please tick only one)

a.	1 – 5	
b.	6 – 10	
c.	11 - 20	
d.	21 - 30	
e.	31 +	

(19) **What sort of employment did you expect to gain following graduation?**

Position _____ Industry _____

(20) **Why did you expect to gain this type of position?**

REMUNERATION:

(21) **What starting salary did you expect to receive?** $

(22) **What was the minimum salary you were prepared to accept?** $

SECTION 4: EXPERIENCES SINCE GRADUATION

In this section we are interested in what has happened to you since you graduated with your Bachelor's Degree from Massey University.

Please tick the appropriate response for each question or provide exact details in the boxes provided.

To answer the questions in section 4 you will need the definitions below.

TERM	*DEFINITION*
'PERMANENT EMPLOYMENT'	in employment that you and your employer intend to be on-going (including voluntary work)
'Full-time permanent employment' **'Part-time permanent employment'**	Working 30 or more hours a week Working less than 30 hours a week
'FIXED TERM EMPLOYMENT'	in employment with a fixed term contract of more than 12 months and less than three years (incl. part-time work)
'TEMPORARY EMPLOYMENT'	a temporary employee, in a job with an expected duration of less than 12 months (incl. part-time work)
'FURTHER STUDY'	undertaking full or part-time further study or continuing education
'NOT AVAILABLE FOR EMPLOYMENT'	neither in employment or further study and not looking for either
'UNEMPLOYED'	not in work but seeking employment

(23) What have you done since graduation?

Please answer the section that relates to your year of graduation and then go to page 6, section 4a, which is for ALL GRADUATES.

2000 Graduates

For each specified month please circle YOUR MAIN STATUS FOR THAT MONTH ONLY i.e. the category that best describes your activities for the greatest period of that month.

1) What was the time gap between the completion of your study and your graduation ceremony?

☐ Months

		Permanent Employment Full time	Permanent Employment Part-time	Fixed-Term employment	Temporary employment	Further study	Not available for employment	Unemployed
2) What were you doing...								
a) At graduation	(May 00)	1	2	3	4	5	6	7
b) 6 months later	(Nov 00)	1	2	3	4	5	6	7
c) 1 year later	(May 01)	1	2	3	4	5	6	7
d) Current status	(NOW!)	1	2	3	4	5	6	7

1999 Graduates

For each specified month please circle YOUR MAIN STATUS FOR THAT MONTH ONLY i.e. the category that best describes your activities for the greatest period of that month.

1) What was the time gap between the completion of your study and your graduation ceremony?

☐ Months

		Permanent Employment Full time	Permanent Employment Part-time	Fixed-Term employment	Temporary employment	Further study	Not available for employment	Unemployed
2) What were you doing...								
a) At graduation	(May 99)	1	2	3	4	5	6	7
b) 6 months later	(Nov 99)	1	2	3	4	5	6	7
b) 1 year later	(May 00)	1	2	3	4	5	6	7
c) 18 months later	(Nov 00)	1	2	3	4	5	6	7
d) 2 years on	(May 01)	1	2	3	4	5	6	7
e) Current status	(NOW!)	1	2	3	4	5	6	7

1998 Graduates

For each specified month please circle YOUR MAIN STATUS FOR THAT MONTH ONLY i.e. the category that best describes your activities for the greatest period of that month.

1) What was the time gap between the completion of your study and your graduation ceremony?

☐ Months

		Permanent Employment Full time	Permanent Employment Part-time	Fixed-Term employment	Temporary employment	Further study	Not available for employment	Unemployed
2) What were you doing...								
a) At graduation	(May 98)	1	2	3	4	5	6	7
b) 6 months later	(Nov 98)	1	2	3	4	5	6	7
c) 1 year later	(May 99)	1	2	3	4	5	6	7
d) 18 months later	(Nov 99)	1	2	3	4	5	6	7
e) 2 years later	(May 00)	1	2	3	4	5	6	7
f) 2.5 years later	(Nov 00)	1	2	3	4	5	6	7
g) 3 years on	(May 01)	1	2	3	4	5	6	7
h) Current status	(NOW!)	1	2	3	4	5	6	7

In the next set of questions we are interested in your experiences, since graduation, of the following: Further study (section 4a), Time-out (section 4b), Unemployment (section 4c) and Temporary Employment (section 4d).

SECTION 4a : FURTHER STUDY

If you have undertaken ANY further study (see definition on page 5) since finishing your Bachelor's degree, please answer this section.

(If not, please go to section 4b)

(24) In your career since graduation how many months, in total have you spent in further study or continuing education?

☐ Months

FURTHER STUDY CONTINUED

(25) What further study and continuing education have you undertaken since graduation?

(Please start with your first period of study/continuing education after graduating)

	Qualification type and major (where applicable)	Institution name and location	Course Duration (months)
a.			
b.			
c.			
d.			

(26) Why did you decide to undertake further study or training?

(Please tick as appropriate)

a.	To gain formal entry requirement for a specific career	
b.	To enhance career prospects in a particular field or job	
c.	To enhance career prospects in general	
d.	To follow a personal interest	
e. (i) (ii)	Other *(please specify)*	

SECTION 4b : NOT AVAILABLE FOR EMPLOYMENT:

If there were ANY times since you graduated when you were not in work (and NOT LOOKING for work or studying), please answer this section.
(If not please go to section 4c)

(27) Were you having time out from employment or further studies for any of the following reasons?

(Please tick as appropriate)

a.	Looking after children or other dependants	
b.	Ill health	
c.	Age	
d.	Travelling or leisure activities	
e.	Awaiting the start of a pre-planned course or job you have secured	
f. (i) (ii)	Other *(please specify)*	

(28) In your career since graduation how many months, in total, were spent having 'time-out' (rough estimate)?

☐ Months

SECTION 4c: UNEMPLOYMENT:

If there were ANY times since you graduated when you were not in work but were looking for work, please answer this section.
(If not, please go to section 4d)

(29) **Looking back over your career since graduation how many months, in total, have you been unemployed?**

☐ Months

(30) **Whilst you were unemployed were you looking for...**

a.	Full-time permanent employment	
b.	Part-time permanent employment	
c.	Short-term employment	
d.	Freelance employment	
e. (i) (ii)	Other *(please specify)*	

(31) **When looking for employment were (are) you prepared to work:**

		Yes	No
a.	In any geographical location		
b.	At any LEVEL of employment		
c.	In any size of company		
d.	In any type of organisation (industry or sector)		
e.	In any type of occupation (that you are capable of)		

(32) **What factors do you feel hindered you in your search for a suitable job?**

SECTION 4d: TEMPORARY EMPLOYMENT:

If you have had ANY temporary jobs (see definition on page 5) since graduation, please answer this section.

(If not please go to section 5, on the next page)

(33) **In your career since graduation, how many months, in total, have you spent in temporary/short-term employment?**

☐ Months

TEMPORARY EMPLOYMENT (CONTINUED)

(34) Temporary job history – what short-term jobs have you had since you graduated from Massey University?

(Please start with your first temporary job since graduating)

	Job Title (or type of work) (i.e. work placement, temping)	Type of organisation (e.g. Business activity)	Duration (mths)	(wks)
a.				
b.				
c.				
d.				
e.				

(Attach extra sheets if you wish or use the comment box at the end of this questionnaire).

(35) What were your reasons behind taking the temporary or short-term employment?

(Please tick all that apply)

a.	Family reasons	
b.	Needed the money	
c.	Couldn't find a permanent job	
d.	Interested in the work	
e.	Thought it may lead to a permanent job	
f.	To get work experience	
g. (i) (ii) (iii)	Other *(please specify)*	

SECTION 5: EMPLOYMENT EXPERIENCES

In this section we are interested in your experiences of permanent or fixed-term employment (see definitions on page 5) since you have graduated from Massey University with your Bachelor's degree.

Please circle the appropriate response for each question or provide exact details in the boxes provided.

(36) How many periods of permanent or fixed-term employment have you had since graduation? (ie. Number of permanent jobs)

☐ Period(s)

(If you have had no permanent or fixed-term work please write '0' in the box provided and go straight to section 6, question 55)

(37) In your career since graduation, how many months in total have you spent in permanent employment or fixed term employment?

☐ Months

(38) Once you started looking for a permanent or fixed-term position, how many MONTHS did it take to find one?

☐ Months

(39) How many positions did you have to apply for in order to secure your first job?

(Please tick only one)

a.	1 – 5	
b.	6 – 10	
c.	11 – 20	
d.	21 – 30	
e.	31 +	

Please answer the following questions about your current job (if not currently permanently employed please answer for your most significant permanent job since graduation). Please answer ALL the questions in this section about the SAME job.

(40) Will you be answering questions about your:

a.	Current job	
b.	Most significant job	

(Please circle applicable answers)

TYPE OF JOB	**Yes**	
a) Are (were) you full-time?	1	
b) Are (were) you part time?	1	
c) Is (was) your contract for a fixed period?	1	→ ☐ year(s) ☐ months
d) Are (were) you self-employed?	1	
e) Are (were) you voluntary (unpaid)?	1	

(41) If you are (were) in paid employment, please select the category which most closely describes your annual wage or salary.

(If you are working part-time please answer this question for your equivalent full-time salary).

a.	Up to $20 000	
b.	$20 000 to $25 000	
c.	$25 001 to $30 000	
d.	$30 001 to $35 000	
e.	$35 001 to $40 000	
f.	$40 001 to $50 000	
g.	$50 001 and over	

(42) What type of business do (did) you work for? (Main business activity of the organisation?)

(43) i) What is (was) your full job title.

ii) What type of work do (did) you do?

(44) **i) Approximately how many are employed at your site (this branch/office/factory)?**

a.	Less than 5 employees	
b.	5 – 19 employees	
c.	20 – 49 employees	
d.	50 – 99 employees	
e.	100+ employees	

ii) Approximately how many are employed in your Company as a whole?

a.	Less than 5 employees	
b.	5 – 19 employees	
c.	20 – 49 employees	
d.	50 – 99 employees	
e.	100+ employees	

(45) **City/town in which your job is (was) based?**
(Or country if not in NZ)

(46) **Would you describe your job as 'graduate' employment in the sense that:**

(Please tick all those that apply)

a.	A degree was a formal entry requirement	
b.	A degree was helpful in getting the job	
c.	The work requires graduate ability	
d.	The previous holder was a graduate	
e.	Entry was via a graduate trainee programme	
f.	None of the above	

(47) **Which of the following best describes your job?**

(Please tick only one)

a.	Position newly created (NEW JOB)		Please answer part (i)
b.	Position existed previously but content slightly changed (SEMI-NEW)		
c.	Existing position (OLD JOB)		Please answer part (ii)
d.	Unsure		

i) NEW JOB – job created due to: *(Please tick all those that apply)*

a.	Changes in technology	
b.	Company expansion	
c.	Company restructuring/rationalisation	
d.	Unsure	
e. (i) (ii)	Other (please specify)	

ii) OLD JOB – please indicate the status of the previous job holder. *(Please tick only one)*

a.	Previous holder was a graduate	
b.	Previous holder was NOT a graduate	
c.	Unsure of status of previous holder	

(48) How important were the following in getting your job?

(Please circle as appropriate)		Not important	Fairly important	Very important
1.	Having a degree.	1	2	3
2.	Having a degree in your specific subject.	1	2	3
3.	The quality of your degree (i.e. grades)	1	2	3
4.	Your work experience before/during your time at Massey University.	1	2	3
5.	Your work experience since Massey University.	1	2	3

(49) Please note any other factors, which were important in getting your job?

(50) What prompted you to take this type of position?

(Please look down this list and select 3 (including 'other' if relevant) and then rank them in order of importance (with '1' being the most important etc.)

	Rank
a) Because it followed on from my degree subject	
b) It was one of few options available	
c) It suited my skills and interests	
d) I was attracted by good prospects, salary, promotion etc.	
e) I just heard about it from a friend	
f) It arose from my previous work experience	
g) Family and friends suggested the idea	
(h) Other (please specify)	

EXPERIENCES IN THE JOB:

(51) Do you consider yourself being under-employed (not being used to your full capacity and potential) in your job? *(Please circle the most appropriate option).*

Not at all	Slightly	Very
1	2	3

(h) If you do feel under-employed, please describe in what ways.

(52) To what extent have you encountered the following difficulties in your job?
(Please circle all that apply)

		Not at all	Hardly at all	From time to time	A fair amount	A great deal
a.	Tight control (lack of autonomy)	1	2	3	4	5
b.	Lack of proper or unsatisfactory training	1	2	3	4	5
c.	Lack of career opportunities	1	2	3	4	5
d.	Lack of necessary subject knowledge	1	2	3	4	5
e.	Lack of necessary skills	1	2	3	4	5
f.	Age discrimination	1	2	3	4	5
g.	Racial discrimination	1	2	3	4	5
h.	Sex discrimination	1	2	3	4	5
i.	Lack of challenging work	1	2	3	4	5
j.	Lack of supervision/direction	1	2	3	4	5
k.	Poor relationships with other employees	1	2	3	4	5
l.	Poor relationships with management	1	2	3	4	5
m.	Other *(please specify)*					
(i)		1	2	3	4	5
(ii)		1	2	3	4	5

(53) When you think about your job, consider your employment experiences and circle the appropriate options in the grid below.
Note: N/A means not applicable

		Very Little (low)	Moderate (med)	Extensive (high)	N/A
a.	Volume of work	1	2	3	4
b.	Variety of tasks	1	2	3	4
c.	Level of responsibility	1	2	3	4
d.	Autonomy/independence	1	2	3	4
e.	Supervision of others	1	2	3	4
f.	Performance feedback	1	2	3	4
g.	Career opportunities	1	2	3	4
h.	Volume/levels of training	1	2	3	4
i.	Use of skills/subject knowledge gained at Massey	1	2	3	4

(54) Having outlined your experiences regarding certain elements of your job in the previous question, we would now like you to rate your satisfaction with these job elements?
Note: N/A means not applicable

	(Please circle the applicable options).	Not at all satisfied	Satisfied to some extent	Satisfied to a considerable extent	N/A
a.	Volume of work	1	2	3	4
b.	Variety of tasks	1	2	3	4
c.	Level of responsibility	1	2	3	4
d.	Autonomy/independence	1	2	3	4
e.	Supervision of others	1	2	3	4
f.	Performance feedback	1	2	3	4
g.	Career opportunities	1	2	3	4
h.	Volume/levels of training	1	2	3	4
i.	Use of skills/subject knowledge gained at Massey	1	2	3	4

SECTION 6: REFLECTION AND ASPIRATION

In this section, we are interested in your thoughts on your career to date since you graduated.

(55) How satisfied have you been with your career development since your graduation?

(Please circle the most appropriate option)		Not satisfied at all	Satisfied to some extent	Satisfied overall
a.	Pace of career progress	1	2	3
b.	Opportunities available	1	2	3
c.	Support and advice given to you	1	2	3
d.	Use of skills and experience	1	2	3
e.	Overall career development	1	2	3

(56) To what extent, has your chosen field of study (i.e. type of degree and major) contributed to your career so far?

(Please tick the most appropriate option)

a.	Not at all	
b.	Any university degree would have done	
c.	Specific degree useful (i.e. BBS)	
d.	Degree and major useful	
e.	Degree and major essential	

(57) How important were monetary factors such as your student loan and future earning potential to your choice of study programme? *(Please circle the most appropriate option)*

Very Unimportant	Unimportant	Neither	Important	Very Important
1	2	3	4	5

(58) In light of your employment experiences, given the opportunity, would you have changed any of the following aspects of your university study?

(Tick any that apply)

a.	Education institution	
b.	Type of degree	
c.	Major	
d.	Timing of study (i.e. not straight from school)	
e.	Mode of study (i.e. internal/extramural, part-time, etc.)	
f.	Other *(please specify)*	

(h) **If so, why?**

(59) In terms of your career, where would do you expect to be a year from now?

(Tick all that apply)

a.	No change	
b.	Same position, increased remuneration	
c.	Same organisation, position promotion	
d.	New organisation, same type of position	
e.	New organisation, different type position	
f.	Further study	
g.	Time-out from career (Travel, family reasons etc)	
h.	Unemployed	

(60) FURTHER COMMENTS

We realise that as many of the questions have been in multi choice format, this has not allowed for any elaboration. If you wish to, please use the space below to add to any of your answers or to make any other comments.

Thank you for participating in this study. We appreciate your time and effort!

Please return your completed questionnaire in the freepost envelope provided.

APPENDIX C

NZ STANDARD CLASSIFICATION OF OCCUPATIONS 1999: MAJOR GROUPS

Classification Structure

The classification structure is designed to allow the grouping of occupations to provide:

- statistical description and analysis of the labour market
- analysis of the social and economic structure of society
- matching of job seekers and vacancies.

NZSCO99 is divided into nine major groups, each with its own characteristics.

Major Group	Skill Level
1 Legislators and Administrators	Experience and/or formal qualifications
2 Professionals	University degree
3 Technicians and Associate Professionals	New Zealand Certificate or other advanced vocational qualification
4 Clerks	On-the-job training
5 Service and Sales Workers	On-the-job training
6 Agriculture and Fishery Workers	University degree, on-the-job training, experience
7 Trades Workers	Trade Certificate or other vocational qualification
8 Plant and Machine Operators and Assemblers	On-the-job training
9 Elementary Workers (incl Residuals)	On-the-job training

Major Group	Sub-Major Groups	Minor Groups	Unit Groups	Occupations
1 Legislators, Administrators and Managers	2	6	14	34
2 Professionals	4	17	46	99
3 Technicians and Associate Professionals	3	16	54	119
4 Clerks	2	6	18	34
5 Service and Sales Workers	2	8	17	36
6 Agriculture and Fishery Workers	1	4	14	35
7 Trades Workers	4	14	31	64
8 Plant and Machine Operators and Assemblers	4	20	58	127
9 Elementary Occupations (incl Residuals)	3	8	8	17
Total	**25**	**99**	**260**	**565**

APPENDIX D

COMMENTS FROM GRADUATES EXPERIENCING UNDEREMPLOYMENT

If you do feel under-employed, please describe in what ways...

It is very 'experience-based' where knowledge of the industry is more important than education but sometimes businesses need to accept advise on an educational basis rather than take all advise from people who have been there for years etc.

Boss finding it hard to hand suitable work over, he continues to take on too much himself. Some work could be done by much less qualified staff.

In science community, can't go far without post-grad.

Too much admin, not enough thinking.

Tasks generally simple, quick to learn with little or no skill required.

Mot all my skills are utilised. There is no budget for me to do awesome branding promo's etc.

Presently trained to store manager level. Waiting for position to become vacant that I wish to apply for.

At the moment the position is only utilising some of the skills, which I possess. Communication and leadership.

Obviously this job doesn't utilise any of my other skills. Some of these I use for volunteer work and short contracts. Others will be used when I land a job in the industry I have trained for.

Lack of responsibility. Expected greater delegation from superiors.

Job doesn't provide challenge and variety. Job doesn't match my interests continually – my intelligence.

You do not need a degree to do this job. However, I am not unemployed in the sense of nothing to do because I am very busy.

I have much more to offer than I currently am able to give. Am leaving this job to do my O.E.

in one month.

No positions available for promotion. Current position is no longer challenging.

No responsibility, cannot use initiative, no challenge (I am quitting soon though!)

I am not currently using the potential of all the information and technical knowledge, which I learnt while studying for my degree.

Feel my strengths weren't used efficiently.

Mostly using techniques I already learned during my masters degree. Not challenged to learn new skills and techniques, although I am expecting this to happen in the next few months.

Not using all my knowledge, skills, and abilities. Would like to study post-grad in 2002.

Lack of strategic understanding by dominant stakeholders. Doctor shareholders, limits the activities/ initiatives we are able to pursue and develop.

Feel that I am capable of achieving better results but can't because of budget restraints and poor supervision.

Not given the responsibilities and challenges I am capable of.

Autonomy/ responsibility

Small farm of 200 acres/ local govt elected member at community board level – both part-time.

Could spend more time in front of customers.

Skills I have in business area, accounting skills.

Youngest – therefore hard to be respected manager

Salary

Managers are incompetent and it is frustrating to have knowledge gained in my degree, and could manage things better. In my occupation tertiary knowledge/qualification is undervalued.

I'm in a seniority-based system. As I'm new I'm at the bottom, experience does not count.

Office politics prevent me from improving a number of inefficient and ineffective systems, and frequently undermine my ability to perform as effectively as I would like.

Not challenged enough

Still a small organisation. As such, all of us need to perform basic work at some point.

Could be doing more analysis and reporting of the data I generate.

Want to use more HR and less sales skills.

No room to expand (i.e. promotion, small company)

Do not use degree skills specifically would like to use them more.

I was employed as a graduate, but I have had 10 years wider experience, which is slowly being utilised as it becomes recognised.

Have to work within a set budget that I wish was more flexible. I feel more

people/schools in my town could benefit from having a CIR (Coordinator for Int relations).

Lack of autonomy. Not given enough opportunity to be involved with the decision making processes

No chance for future growth/promotion so job stale.

Have very good skills, financial, management, commercial acumen, but not utilised enough

Didn't do a degree to end up as a PA but found it difficult to get a job with some management requirements as I'd been out of the work force for some time (mature student). Decided to take a job to gain current experience, then to move on.

Skills gained in degree not utilised

Some days I have no classes and am given no lessons to plan or work to mark. It depends on the school timetable and the school. (I work in 4 schools). Sometimes I have too much work. Test time is very slow for me though.

Not being often enough exposed to contracts that required learning new skills.

Not enough experience

Because of family commitments I don't work the hours I could

It only uses a small amount of the many skills I believe I have to offer.

My strengths are in creative writing media and drama. Very few jobs in New Zealand to cater for this, so that's why I went into teaching.

Currently changing position – GM is redeveloping job to reflect my skills and an appropriate salary

Ability to use skills mostly limited to operational matters and staff management issues

Do not need a degree for this type of work

Position has not lived up to my expectations

Could be used more in innovative ways/ ideas.

No challenge

Consulting is feast and famine

Don't use degree and skills, very routine work.

Inability to secure full-time role as a tutor means that some of the work I do is not covered directly by my contracted payments. I expect this situation to change within the next week after the latest appointment round.

Due to structural senior management problems in the organisation

I have an MA – I am overqualified for data entry work, and have the potential to earn more than $13 an hour doing menial, monotonous jobs.

I do much basic clerical work therefore not spending time using degree enhanced knowledge

and skills. I am trying to sort this out.

Under utilised sometimes

Range of personal attributes and abilities are being under utilised

Used to perform some basic duties that other staff could do instead.

Need to spend more time in programming

Not enough responsibility given to me. Need more challenges

Does not utilise degree skills

I work for the govt!

I only need to use 50% of my brain capacity

Am doing work at a lower level than what I am capable of.

Some manual work could be done by others without the skill base.

The job is unskilled but I have deliberately chosen it so I can pursue my own interests.

I am employed to assist students who often do not want to be helped. I am helping them, when possible, to complete their tasks rather than having my own tasks to complete. The students are challenging rather than the work.

Having a set prescribed course to teach, not being able to develop them myself.

Not full use made of skills or being promoted through having experience in the job – not being paid for the work done, not feeling as though I am being challenged.

At the moment I am not being challenged.

The work is very menial i.e. a lot of it a "non vet" could quite easily do. Not enough medicine and thinking.

Unable to find employment because of age.

No using full skills as is such a small office.

Only using a part of my training.

Could easily do a job with a lot more responsibility.

I am bogged down doing administrative work instead of developing my valuation skills further. My company isn't helping me get registered which means I must take on less responsibility than I am able to.

Not teaching all my subjects.

It is not as 'High pressure' as some of my previous roles, and not as demanding in context. This is my lifestyle choice.

Don't feel as if I'm being challenged. Not really learning new things anymore.

I should be a senior manager but am considered too young

Due to time constraints and workload I have been unable to use some skills i.e. problem solving to fullest potential

Challenging at first, but no progression in role.

Not being able to fully utilise the skills and knowledge I gained from my degree.

It didn't suit my qualifications from Massey. Also, I did not plan to form a career around my job.

I do a lot of data entry... do this, do that type reports... not using any high level statistics... every basic... plots/tables. Do you know the game Warcraft? They treat me like a peon.

My skills and experience are not as well recognised by my current employer, and given that I've done some post-grad papers too.

Often bored, sick of having to try and motivate slack workers and put up with their whinging. Feel that I would like more responsibility.

Salary

Strong emphasis on technical skills; not much use of problem solving or creative thinking.

Menial tasks, undervalued. Low pay. Not challenged.

Role has been expended as far as can be – time for new challenges.

Have more skills than get to be used.

Undervalued, people in more senior positions are less qualified, previous experience not really recognised.

No room for work outside the general work requirements

Full range of skills not being utilised.

I have a wide range of skills being qualified as a chemical analyst as well so those skills are not currently being used.

This job is basically just paper shuffling

There are a lot of skills that I am not using in this job especially computer skills. I am finding that it is a male dominated industry and I am not being heard sometimes. It is very hard to change things when my manager is not around much to support me. (No one respects him in any case). Everyone is quite happy doing the same old thing. Change is very much feared in this 'old' company.

All I'm doing is writing ads.

I am the third technician to be employed at this practice – the previous 2 technicians have no qualifications. This means that I have skills, which are yet to be used as the other technicians do not have the same training as I have.

Held position before gaining degree with more responsibility and much better remuneration.

I now feel I need a new challenge.

I feel underemployed mainly in the sense that I'm not using my degree and passion in the field that I have the most interest in.

Limited time available for the role

New position – at times lack of clarity/ structure.

Nursing is not a valued profession by employers/govts. Skills and knowledge gained from my BA are threatening to colleagues/ management. Change (positive) is difficult to instil into old 'school' ways.

Would like to be in management by now, not high up, but being responsible for what I do.

Skills learnt at Massey not used. Not required for decision-making.

Technical and practical abilities well beyond those required for the position.

Would like to do more in the statistical side of what I am doing

Would like more variety i.e. Auditing work and management accounting

Limited scope

Not managing people/ projects. Not using all my product development training.

I have more skills to offer, however my choice to do a more cruisier, less stressful job.

Too much emphasis on pure sales, not enough marketing and numeracy skills used.

Lack of variety in job. Lack of funds to full explore cases.

Organisation refuses to acknowledge my expertise, experience.

Do not use my skills at all.

A lot of down time and going through the motions. A lot of hard work overcoming obstacles, but this will subside as I become more confident in this position. Have only been in this position for two months.

There are tasks that I could do, but other staff members are doing them, in time I will be able to do them (in the position longer).

I don't believe that previous work experience or qualifications are valued in the police, I believe that I could use both to help the police organisation.

I could do so much more. At uni we did more interesting stuff.

Business and management skills under-utilised.

ESOL students need more contact time.

Work is ok but not given permanent position – no reason but have heard unofficially that it is my age.

Little input and little ongoing support. Unsuitable, inefficient management.

Team leader less qualified than team.

The job requires none of the skills I have learnt at Massey.

I'm not using skills I learnt at Massey – waste of time.

My work bears no relation to my interests and skills.

Not sufficient work

Many 'employers' are not flexible to 'employing' parents who wish to have school holidays with families. I.e. Employers are often not 'family-friendly' – hence I chose predominantly self-employment. Thus employers miss out on my skills unless they can afford (and choose to) contract me.

I do not feel stretched to capacity. I am slowed by others in the organisation

Could use more of my graduate knowledge.

A retarded chimp could manage day-to-day systems. No input into decision making. Ideas ignored. Any sort of strategic planning seems to be ignored.

Intellectually

My academic skills are not always fully utilised – but I find ways to use them.

Narrow scope of job description, and traditional ideas of our department by management.

Not enough room to write all.

Not enough responsibility, should be manager.

The job doesn't offer the challenges I was made to believe it would offer. High level of administration work added after I started.

No room for promotion, no up-skilling opportunities. Position doesn't put my degree to use.

My education is not used at all.

Scope of position limitations of methods preferred by previous/ current supervisors. Lack of interest in new methods, suspicion of university degrees.

My experience and qualifications far exceed the requirements of the position

Skills and knowledge not being used because of business politics.

Work I'm doing does not use my research skills, or my level of creative thinking.

Capable of dealing with other areas of industry.

Able to market more strategically

Boss is too set in her old ways (doesn't like change)

The role is not particularly mentally stimulating or challenging I have a lot more to give, but no opportunity to do so within firm.

I have outgrown position as it is no longer challenging and there is nowhere else to move within the company

I believe my current role does not make use of my management and leadership abilities.

Not working full-time due to having a family that requires my time.

Became involved in some monotonous no brainer tasks that anyone could do and don't use much of my degree at all.

Not utilising all the knowledge I have gained.

Do not feel like I am using the skills or knowledge which I believe I am capable of, from which I learnt during my time at Massey.

Delays while waiting for political buy-in to new programmes/ initiatives.

Lack of funding resources to pay full time staff was identified. Inability for Pacific Community to have their perspective heard, thus, frustration. Reactive to bureaucratic views, not always having full information. Depts changing policy, implementation. Dept always feeling threatened if we were able to display more commonsense. Being forced into assimilation methods.

I am creative and there are not many outlets for this. Also leadership is difficult in an older-male-dominated industry.

Most of the job could be done by a well-trained monkey.

It was absolutely dead boring a lot of the time.

My creativity and initiative were completely stifled.

In every possible way that researcher such as Borgen, Amundson and Feldman describe.

Want jobs more challenging not just admin work. Not made to think solve problems

My job requires no academic or intellectual ability/ acumen. One only needs common sense.

Constant conflict with management over their incompetence. No scope to use management skill held before commencing degree, let alone those obtained or improved during it. Rewarded the same as other employees who are markedly less competent than me in the requirements of our job.

In terms of responsibility for activities, although I am getting increased responsibility as time goes by. (I have only been in my current position 9 months).

I have additional 'higher level' skills that are not being utilised due to time constraints and perceived job requirements.

Not challenged. Using old techniques.

Too much time on mundane tasks, not enough chance to be involved in strategic planning

HR component very low.

Job has lost its challenge

Due to personal factors (husband terminally ill).

It is losing its challenges

Capable of so much more than current work. Current work is mostly data entry, so it doesn't use my knowledge and skills.

It was a basic admin job therefore utilising none of my Massey skills such as psychological knowledge.

For me this position is a grand level entry for future work in policy in this area. In that regard I am slightly under-employed. There is development for me here all experience at this level will be invaluable when I am directing policy.

Low pay

Few prospects of advancement.

I am now in a position to take on further responsibility without that the job will loose challenge.

Company not using all the skills that are available from myself. Not moving up.

Not taking advantage of my communications and management skills.

I would like a leadership position and am actively seeking one.

Think I have a lot to offer re personnel development/ self growth/ motivation (human resources in permanent/ full time capacity)

Could have been utilised as a boss more than 1 day a week, when bosses had day off.

Not being able to use all my skills in HRM in an administrative capacity

Not enough responsibility/ challenges.

Not pushed to full capabilities. Familiar with job, need new challenges.

Not using my degree very much.

Just not enough clients to keep me fully occupied for 12 months, 45 hours a week.

Management skills learn not fully utilised.

Whilst I enjoy many aspects of job – e/g autonomy – crisis solving – prioritising – degree skills not being utilised.

More relevant experience and better management skills than manager – appointed due to age/ gender since my employment – I also applied for position.

My opinions are ignored – The doctors only value their own opinions.

Due to the nature of the job, have quiet times, overcoming this by upskilling and doing more research.

I know the work I am doing does not utilise many of my skills but I have chosen to work at this level so I could pursue further study.

Besides my recent 3 month placement (social work), I haven't utilised my degree.

Was 'secretarial/ office administration work – know with my grades and abilities that I was capable of more than that.

Not enough hours are available, not much use of my qualifications

Capable of higher level tasks.

Not working at the level of statistics that I can.

Bored. Not using my research skills. Capable of a lot more.

Have to do other jobs that are unrelated (e.g. admin).

Not appropriate work for degree (not related).

While it has nothing to do with my study, that is not why I took the job. It is more for something to do while I continue my job search proper.

Problem solving skills not utilised at all

Job role is being watered down, lacks creativity

Barriers to add value to role.

Some tasks not particularly challenging but need to be done.

I work another full time job in my own company.

I also write software for people doing masters degrees.

Have a lot more skills and knowledge I could be using if I had the opportunity.

The organisation (Police) is in need of a total review.

Tends to be practical job; little opportunity for creative thinking or new ways of carrying out duties. Also, am 'doctor's handmaiden' for a good proportion of my working week.

The job is simply labouring with little avenues for decision making or much use of skill.

I don't get to use much of my knowledge or experience gained in previous job or in my degree.

Not given all opportunities for career advancements.

In the next few weeks this feeling will disappear as I will be managing the business while my boss is in New Zealand and the challenge of operating the business is large but great for my personal growth and is an excellent opportunity for me.

Not given responsibility and opportunity to make decisions.

Not given enough variety and challenging work.

Didn't utilise my full skills as a food technologist

There is not much IT professional tasks

Too busy with everyday tasks to continue any further study or research into topics of interest.

No positions available which are able to utilise other skills/ abilities.

I think perhaps I should be in the business world as opposed to the teaching profession, but feel that, in reality, my age would be against me making the change.

Too much routine work, not enough variety. I really wanted to do Product Development, not Quality Assurance which is what I am doing now.

Good to do some more academic work/ research

Under paid, lack of career, work is uninteresting.

Because the owner (property) disregards or overturns most or all of the decisions I make.

I am capable of doing thins better than existing employees.

You do not need brains to do my job. It helps to have studied at uni because you are quick to grasp and understand new concepts and adapt to change but anyone with enough training (on-going) could do it.

I feel like any brainless slob could do what I am doing now.

In a statutory enforcement role there is very little room for creative thinking. Although good interpersonal skills are required, decision making is always based on received legislation and regulations. You become very much a functionary or instrument of Government. Things are imposed on you which you feel you have very little control over.

The airforce does not recognise my BSc as giving me any extra skill.

I have only started one week ago Jan 4th 2002 so am learning new systems.

Employer unaware of skills and abilities.

I feel I can do more than I currently am, but am not given the opportunity

Have not been given full autonomy with managing my staff due to perception that I have had no experience in staff management/ leadership.

The Chinese approach to work is different to the West. Spending time at work is valued over productivity at work – when these is nothing to do and a Western boss would tell you to go home) you are expected to remain. I have to stand sentry-style when students arrive and leave. I spend more time doing this than actually teaching! A lot of my working day seems unproductive and pointless.

Organisational skills and 'degree' material sometimes considered ineffective and unnecessary.

Not much exposure to challenge, variety, etc. Decision making was handled by a rigid system, removing responsibility from workers.

Accounting package not used.

My position offers few opportunities for further training and improvement of skills.