



RESEARCH PROGRAMME ON
EDUCATION EMPLOYMENT
LINKAGES

**Education Employment Linkages:
International Literature Review**

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Contents

List of Figures	ii
Abstract	iii
Acknowledgements	iv
Executive Summary	v
Chapter 1: Introduction	1
1.1 Background	2
1.2 Methodology	4
1.3 Structure of the Review	5
Chapter 2: Choice in Education-Employment Linkages	7
2.1 Individual Choice	8
2.2 Pragmatic Rationality, Structure and Agency	10
2.3 Indigenous Challenges to Individual Choice Models	13
Chapter 3: Crafting Identities	15
3.1 Conceptualising Identity	16
3.2 Youth Identities and Education Employment Linkages	18
Chapter 4: Discovery and Development of Abilities	21
4.1 Developing Learning Abilities	21
4.2 Making Plans and Setting Goals	22
4.3 Discovering, Developing and Signalling Abilities	25
4.4 Matching Abilities to Employment Opportunities	27

Contents (Continued)

Chapter 5: Opportunities and Structures	29
5.1 Family Influence	29
5.2 Communities and Neighbourhoods	31
5.3 Mentors and Role Models	34
Chapter 6: Systems Linking Education and Employment Choices	37
6.1 International Systems	37
6.2 School-Employer Linkages	40
6.3 New Zealand's National Certificate of Educational Attainment	43
Chapter 7: Conclusion	47
References	51

List of Figures

Figure 1: Costs and Benefits of Education	8
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Abstract

This report is the second in the Education Employment Linkages Research Report series. Its purpose is to document what is already known in the international literature, drawing on the research team's respective backgrounds in education, sociology, indigenous studies and economics to begin a trans-disciplinary account of key issues for young people making education and employment choices in their transition years from school to work. The report focuses on five themes in the literature: choice in education-employment linkages; crafting identities; discovery and development of abilities; opportunities and structure; and systems linking education and employment choices.

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Executive Summary

Introduction

1. The transition from an Industrial Age in the late 20th century to a Knowledge Age in the early 21st century means that forging a career path is fundamentally more difficult than it used to be. This raises critical questions for people involved in assisting young people as they make education and employment choices. Once viewed as marginal to public policy and focused on providing career advice to early school leavers, career support services are now more broadly understood as ‘career development’ integral to national policies of economic transformation.
2. This report is the second in the Education Employment Linkages Research Report series. Its purpose is to document what is already known in the international literature, drawing on the research team’s respective backgrounds in education, sociology, indigenous studies and economics to begin a trans-disciplinary account of key issues for young people making education and employment choices in their transition years from school to work.

Choice in Education-Employment Linkages

3. Choice can be conceptualised in a variety of ways. Significant disciplinary differences exist between approaches that emphasise the role of individual agency in choice-making (as economics tends to do), those that emphasise structural conditions that constrain choice (sociology and education) and those that incorporate community involvement in making choices (as is prevalent in indigenous studies research).
4. The economics literature is built on the Shultz-Becker individual choice model of human capital investment, in which an individual compares the income benefits of further education with the costs (including forgone wages) of ongoing study. Initially these models focused on a single choice made at a key moment in a young person’s transition from school to work; more recent contributions have treated human capital decisions as sequential choices repeated year after year.
5. A lengthy tradition in the sociology and education literatures emphasises the powerful impact of structural constraints – particularly class, gender and ethnicity – on young people’s decision-making in their transition years. More recently, there has been a developing interest among social scientists in approaches to choice-making that explore interaction between structure and agency in youth transitions. A key text by Hodkinson *et al.* (1996) conceptualises choice in transition in terms of ‘pragmatic rationality’, explicitly incorporating the unforeseen, as well as the planned, aspects of career decision-making.
6. The model of pragmatic rationality has three interlocking dimensions: decision-making is a process, not a one-off event, and is part of the life course; choosing a post-school path is part of a wider lifestyle choice and is strongly shaped by context and culture; and decision-making is a social process, taking place in interaction with others.

7. It may not only be the young people involved who should be encouraged to broaden their horizons. Literature in the field of indigenous studies has highlighted ways in which forms of institutional racism are in play for some young people attempting to navigate the careers landscape. This raises the issue of who interprets the landscape and plots the pathway through it.
8. When considering choice, the pathways language, economic models and the pragmatic rationality approach all tend to conceptualise agency in ways that either suggest, or are firmly based on, the primacy of the individual, even in a context of constraint. Developments in indigenous studies research challenge this focus in important ways. The choices of young indigenous people thus may not fit neatly with standard models of choice. An extensive literature regards them as being ‘at risk’ and/or in some way deficient because of this, failing to understand these choices in terms of the aspirations, world views, values and practices of these young people and their communities.

Crafting Identities

9. Many studies suggest that young people explore particular pathways because these suit the sense of identity that each individual has or would like to have. A great deal of the literature on youth transitions now conceptualises identity not as a state definitively arrived at, but as relational, multiple, contested, and dynamic, particularly because these young people are engaged in ‘border crossing’ from childhood to adulthood. This complex and fluid understanding of identity challenges traditional models of career decision-making by proposing that identity is neither fixed (as in trait theory) nor linear (as in developmental theory).
10. This understanding of the complexity of youth identities has implications for understandings of how young people engage in education employment linkages and how formal systems can assist them in this process. Since the ‘ideal’ identity that many schools tend to communicate is associated with the majority culture and dominant social class of their society it is not surprising that students who belong to neither are the ones most likely to take on the identity of ‘school resister’ and be given the unchosen identity of being ‘challenging’ or ‘a failure’.
11. A significant proportion of the literature on mismatch between schools and young people who ‘do not fit’, particularly research focussing on young indigenous and ethnic minority people, is located within a deficit framework that conceptualises these young people as ‘at risk’, locates this risk primarily at the individual or ethnic community level, and is concerned with risk management and the unpredictability of these young people in terms of their decision making with regard to school leaving and job choices. A more interesting and important question is this: given the importance of identity to young people’s experience of education-employment transitions, how can the understanding of youth identities outlined in the previous section inform our research question about helping young people make effective education-employment choices?

Discovery and Development of Abilities

12. Guy Claxton has emphasised the importance of enhancing young people’s learning *capacities* (helping them to be better learners) to enable them to prepare for a life-time of change. Research explicitly measuring or analysing learning capacities in relation to career and work abilities, aspirations, and choices is hard to find. Nevertheless, some

recent research draws attention to the ways in which young people construct a sense of self as a learner that changes over time and is mediated by the institutional structures in which they learn and which therefore impacts upon their view of work/career possibilities. Young people's understandings of their own learning capacities are critical to their aspirations and ability to engage with particular education-employment linkages

13. The research literature records a wide range of opinion among young people themselves about the difficulties or otherwise of setting career related goals, but some research suggests that those who have such goals are more likely than those who don't to establish themselves in a stable career pathway and to move into work that is a good match for the education or training they have done. A series of approaching deadlines may help individual refine their aspirations into more concrete and achievable goals. Identity work appears to be a key element of this process.
14. This has very important implications for career guidance in schools. Without dynamic working relationships between careers educators and young people any amount of information gathering and recording of goals may founder. Career dialogues or conversations between teachers and students are important, taking care to avoid limited conceptions of giftedness, inappropriate identification policies and practices, low teacher expectations and negative deficit based stereotypes of certain groups of students in the school.
15. Models in the economics literature have sought to explain how individuals choose their careers and their level of education based on their innate abilities. An important class of models in economics, known as signalling or sorting models, assumes that individuals know their abilities, but potential employers do not. Given that individuals with higher ability will choose more education in these models, employers can demand higher qualifications to screen for higher productivity job applicants.
16. More recent models have recognised that an important role for education is to enable students to discover and develop their abilities. This approach suggests that 'failure' in education need not always be a bad outcome. In an entrepreneurial culture, people should be encouraged to try new things and to explore their potential interests and abilities. If they learn in the process that they do not have an ability to do well in a particular course of study, this is important new information in their personal development. This approach also emphasises the importance of education quality in affecting subsequent employment outcomes.
17. Completing a programme of study is an important step towards achieving better employment outcomes, but a substantial literature warns that it is only a step. People can end up in occupations where their qualifications are higher than necessary for the occupation, or where the qualifications lie in different fields, known as education-employment mismatch. This may be due to insufficient demand for people with particular skills, or may be the result of a person completing a qualification in a field where they have no particular ability or interest, or may be caused by structural barriers in the labour market such as discrimination based on class, ethnicity or gender.

Opportunities and Structures

18. Families have a powerful influence on career pathway choices: family relationships are often the primary relationships through which young people craft identities, and family

members tend to be a key, trusted source of information, and of emotional and financial support in relation to career decisions. Young people's career aspirations are often closely linked to family aspirations, and the educational attainments of parents are very strongly associated with those of their children.

19. Family income appears to have a number of related effects. Poverty has a detrimental effect on academic achievement, and this in turn is associated with low aspirations. Poverty at home is also likely to mean that parents struggle to offer financial support to their children to get them through post-school education or may wish them to move straight from school to work in order to start contributing to the family income as soon as possible. Young people themselves may consider this to be important too.
20. Parents may also be influential in ways they may not expect. Several studies suggest that young people are influenced in their ideas about work by the way their parents talk about their own jobs. Neblett and Cortina (2006) found that how children perceived their parents' work in terms of (i) the rewards it offered, (ii) the amount of self-direction parents had, and (iii) the levels of stress involved, all influenced their own outlook. Young people were more likely to be optimistic about their own opportunities in education and work if they saw their parents were positive about their work.
21. A great deal of research suggests that young people from poor neighbourhoods do not achieve as well in school and in their career development as their counterparts in better-off neighbourhoods, known as the 'neighbourhood effect'. It may be helpful to frame these results in terms of risk. It is risky for a young person to move away from home, particularly from a tight-knit community where he or she feels a strong sense of belonging and security. This is especially so for those who have a powerful identification with their community or who don't have many resources in the form of money or qualifications.
22. This risk can be addressed from two directions. One solution involves increasing the opportunities available in a particular neighbourhood or community. This option includes economic development leading to improved job opportunities, but might also include the introduction into the neighbourhood or community of quality educational institutions; so that young people from that community feel that they can take up post-school education without risking the security and sense of identity they gain from belonging to that community.
23. The second possible approach involves increasing the level of security for those leaving to find education or work elsewhere. Since networks play a key role in providing security and helping people explore career development opportunities, it is useful to consider ways of enabling young people to link into networks that offer better opportunities than those available in the neighbourhood but which also give a strong sense of belonging and security.
24. The perceived lifestyles of workers in the industry or occupation (including their personal life, their income and their relationships) are also important when an individual forms an image of a career. One way of creating a bridge between education and employment, therefore, is through the use of mentors who enable young people to engage with learning in an education/training programme, or on the job, through a significant relationship with a person whose position and expertise they respect and trust. This is a topic of particular interest in the indigenous studies literature.

Systems Linking Education and Employment Choices

25. In a number of northern European countries (notably Germany, Austria, Switzerland, Denmark and Luxembourg) there are highly formalised systems based on apprenticeships. Japan also has a highly formalised system involving close relationships between individual school and individual firms. Elsewhere (in the United Kingdom, the United States, Australia and New Zealand, for example) the linkages between education and employment are less structured and require young people to create their own individual pathways.
26. Making an early decision about which education and career path to take can reproduce inequality and reduce choice, but it does enable a high level of focus and training over an extended period. Leaving a decision until much later, and enabling a high level of flexibility in changing course, can mean that a school leaver will flounder in the labour market, lacking useful high level occupational skills. But it also can mean that the young person has considerable freedom of choice about pursuing a career path and may have a chance to challenge parental expectations about that path.
27. Many critiques of systems of vocational education in the research literature focus on their lack of transparency. In particular, problems arise when students are undertaking school work and vocational training (or work experience) at the same time but the links between these are neither close nor clear. The students don't understand (i) how their vocational training links to their school work, (ii) the relevance of their school work to their training, and (iii) how to combine these to create a career pathway.
28. A great deal of research points towards the desirability of integrating academic and vocation work integration but also indicates why there are difficulties achieving this – notably because these are often perceived as having different objectives and are typically set in opposition to each other in formal educational contexts. Academic knowledge and work is aligned with theoretical, abstract, discipline-based knowledge and thinking. Vocational or technical knowledge and work is aligned with practical, experiential and observable phenomena.
29. There are increasing calls to integrate vocational and academic subjects in school as part of the emphasis on an emerging 'new work order', 'new vocationalism' and a 'knowledge society', potentially bringing together the needs of employers and schooling in new ways and giving new impetus to lifelong learner identities. This requires resources: schools must have the necessary time and teacher numbers, and employers must be prepared to take training seriously and to commit resources to this. A Scottish policy programme entitled *Determined to Succeed* is attempting to put these principles into practice.
30. Local and international research has consistently highlighted the need for qualifications that are credible (they are meaningful to employers, educational institutions, students and parents), transparent (it is clear what they are representing and how), and flexible (they can be attained and used in a number of ways). New Zealand's National Certificate of Educational Achievement (NCEA) provides a good example of a qualification, within a wider qualifications framework, that was explicitly designed to address issues of flexibility, transparency, and credibility, as well as to challenge the persistent divide between an academic and a vocational curriculum.

Conclusion

31. This report has focused on five themes: choice in education-employment linkages; crafting identities; discovery and development of abilities; opportunities and structure; and systems linking education and employment choices. In the concluding chapter, the authors bring together recent developments in their four disciplines to lay firm foundations for the remainder of the Education Employment Linkages (EEL) research programme.
32. These recent developments tend to reinforce each other. At their collective centre is the young person, conceptualised as a dynamic individual who is continuously constructing self-identities in diverse contexts, discovering and developing their personal abilities, making purposeful choices that are influenced by perceived and actual social, economic and cultural constraints, and engaging with education and employment systems in their schools, in their workplaces, in their local communities and in their countries
33. The EEL research programme is concerned in particular with systems that aim to support young people make good education and employment linkages. In New Zealand, as in other countries, these support systems are themselves in a state of flux, reflecting the changing conceptualisations reported in this literature review. The next phases of the EEL programme will map the support systems that are currently in place, and analyse how they interact in assisting young people during their transition years.

Chapter 1

Introduction

An OECD study of youth transitions in New Zealand concludes that ‘the recent performance of the youth labour market in New Zealand is very good compared with many other OECD countries’, but also highlights some weaknesses: a group of youth at risk of poor labour market outcomes and social exclusion; not enough people pursuing vocational studies despite excellent labour market prospects in many trade professions; some tertiary institutions not providing youth with skills required in the labour market; and difficulties in reaching young people who disengage from school at an early age (OECD, 2008, pp. 9-10). New Zealand policymakers are aware of the importance of issues such as these, and there is substantial public investment to assist young people make education and employment choices during their transition years. In 2008, the government published a consultation document inviting public feedback on a further policy development involving eleven Ministers. Known as *Schools Plus*, this development aims to promote a broad vision of ‘transforming secondary schooling to encourage young people to stay and compete qualifications, and strengthening partnerships between schools, tertiary education organisations, employers, industry training organisations and non-government organisations to extend the learning opportunities available to students, and to connect young people to their next steps beyond school’ (Ministry of Education, 2008, p. 1).

The education employment linkages (EEL) research programme is a five-year research programme funded by the Foundation for Research, Science and Technology (see www.eel.org.nz). The EEL research programme seeks to provide new knowledge about issues affecting young people’s education and employment choices as they move from school to work. In particular, the aim of the EEL research programme is to investigate how formal support systems best help young New Zealanders make good education employment linkages to benefit themselves, their communities, and the national economy? The research is taking place in five phases (see Dalziel *et al.*, 2007). The first phase is to document what is already known in the international literature about youth education employment linkages, which is the purpose of this research report.

A feature of the EEL research programme is its explicit trans-disciplinary approach, made possible by bringing together the strengths of three New Zealand research centres: the AERU Research Unit at Lincoln University, the New Zealand Council for Educational Research and He Pārekereke at Victoria University of Wellington. The research team includes four senior researchers with backgrounds in the respective disciplines of education, sociology, indigenous studies and economics. This report draws on the literatures of all four of these disciplines to produce a trans-disciplinary review of the current state of knowledge about youth education employment linkages. This was achieved using the collaborative tools suggested by Jeffrey (2003): the development of a common vocabulary; the use of metaphor as an aid to understanding; the contribution of each discipline to the creation of common narratives within the project; and awareness of the forms of dialogue being utilised within the team.

The remainder of this chapter is comprised of three sections. Section 1.1 provides some background to the current policy interest in youth school to work transitions. Section 1.2

explains the methods that were used to prepare the trans-disciplinary literature review, incorporating the ‘systematic review’ method reported in Hughes *et al.* (2005) and Smith *et al.* (2005). Section 1.3 presents the structure of this report, with a brief summary of the material in chapters 2 to 7.

1.1 Background

Gilbert (2005) has described the movement from the late 20th century to the early 21st century as a transition from an Industrial Age, where economic wealth was generated by exploiting natural resources to produce commodities through mass production, to a Knowledge Age, where wealth comes from creating new ideas, new market demands and new niche markets based on personalising existing products and services.¹ As the limits of mass production, natural resources, product-specific machines and semi-skilled workers producing standardised goods have been reached, the nature of work has changed, forcing workplaces to adopt different ways of operating, including changing the roles of workers, owners and managers. As a result, the world of work is becoming more complex and uncertain as old categories and rapid change make it harder to predict occupational futures.

These global trends have been reflected in New Zealand’s policy environment at the turn of the century (see, for example, Dalziel *et al.*, 2008, section 1). The new government elected in November 1999 set up a Science and Innovation Advisory Council, which authored a very influential report explaining the need for economic transformation in New Zealand (Science and Innovation Council, 2002, p. 19):

Hitherto New Zealand companies have created advantage by competing largely on the basis of high quality and low cost, especially in the primary sector. Economic transformation requires that New Zealand’s future global companies, regardless of sector, be based around exploiting ideas and knowledge, and obtaining fullest value from them.

The emphasis on ideas and knowledge was supported by the government’s economic advisors in the Treasury, who argued that ‘policies to generate sustained high per capita growth in a geographic outlier like New Zealand need to concentrate on fostering innovation and on extending the effective size of the market via exporting and other international linkages’ (Lewis, 2002, p. 29). This thinking was accepted by the government in a major policy document, *Growing an Innovative New Zealand*, which was subsequently known as the ‘Growth and Innovation Framework’, or GIF for short. This framework explicitly acknowledged that New Zealand needed ‘a vibrant and well integrated innovation system capable of creating wealth from ideas’ (Office of the Prime Minister, 2002, p. 32). It mandated further investment in education and improving pathways between school, work, and further study or training. GIF was also one of the first official acknowledgements that workplace and employment relations practices are a positive contributor to economic development, rather than a constraint on the ability of firms to grow. This recognition underpinned a focus on developing ‘high performance

¹ Other names for this phenomenon emphasise particular aspects of it: post-industrialism, post-Fordism or post-capitalism (Drucker, 1993); post-modernity and late capitalism (Jameson, 1991; Bauman, 1992); and fast capitalism (Gee *et al.*, 1996). Some authors have taken up specific aspects of the societal and economic paradigm shift occurring: the implications of ‘accelerated flows’ of people, ideas, and money between nations supported by a technological revolution (Appadurai, 1996); the fragmentation of structures and institutions such as the family, leadership, and church, and a heightened awareness and calculation of life risks (Zimmer-Gembeck and Mortimer, 2006); identities based in patterns of consumption rather than in social class (Kenway and Bullen, 2001); and the rise of a new ‘creative class’ of knowledge workers (Florida, 2002).

workplace' models in which employees (including tradespeople) work in autonomous or semi-autonomous teams, use communication 'soft skills', have a voice in the organisation through official mechanisms, and are motivated to develop and use skills as a result of improved management practices within the enterprise (Hiebert and Borgen, 2002).

Thus people and the way people think about work are now central to policies targeting economic transformation. When the OECD (2007) reported on the strengths and conditions of New Zealand's innovation system, for example, they focused on the skills, capacities, and dispositions of the population in relation to physical resources, and highlighted the benefits of a resourceful entrepreneurial population, a unique physical environment, an open society engendering trust, pro-competitive markets, a predictable political environment, and pockets of excellence in new industries like software, creative industries. Similarly the Treasury identifies the development of higher skills, opportunities to re-skill, and 'soft skills' as critical to productivity: 'attitudes and values matter as much as knowledge and technical skill' (Treasury, 2008, p. 2).

These trends mean that forging a career path is fundamentally more difficult than it used to be, and it was never easy. As Borghans *et al.* (1996, p. 71) comment, 'on the one hand, the labor market is very complex, while on the other hand students who have to make their educational choices are rather inexperienced, and make such choices only a few times during their career.' On top of this, women and men must now take account of *movement* and *shift* throughout their careers and lives, whereas careers used to define lives in more reliable and fixed ways, including one in which balancing work and other aspects of life was not the issue it is today (Vaughan, 2008b). Career Services (2007) estimates that 'every year 200,000 new jobs are created and 150,000 disappear or are transformed', stressing that 'a reliable and enjoyable career cannot be left to chance', especially given the 'maze' of future career possibilities.

The Career Services (2007) study and other New Zealand research show that: young people no longer have an immediate or fixed 'destination' from school: many do not see a career-for-life; motivations and identities mean that a pathway from school cannot be taken as a reliable proxy for what it means to the person or what role it has in their lives: and job security or pathway exploration are experienced differentially (Vaughan, Roberts and Gardiner, 2006). Other research shows that young people are on the edge of new understandings about the workplace and 'careers': they see that having a job is a necessary, but not sufficient, condition for having a career, and identify strongly with work/life balance or 'work in life' ideas. Vaughan (2008b) suggests young people are also uncertain about other emergent career development ideas which 'themselves address future uncertainty at the level of the individual (e.g. career portfolio construction and adaptability), the workplace (e.g. outsourcing and global competition, new skill demands), and society and economy (e.g. technology-driven changes, demands for constant innovation, and equity considerations)'. This raises critical questions for people involved in assisting young people as they make education and employment choices. Once viewed as marginal to public policy and focused on providing career advice to early school leavers, career support services are now more broadly understood as 'career development' integral to national policies of economic transformation and conceptualised as both a private and a public good (McMahon, 2006).

The emergence of 'career development' signals a move away from vocationally-oriented forms of career planning and guidance that in the past were the main tools used by careers practitioners advising people, particularly young people in schools. Career development now addresses people of all ages throughout life, whenever they are making education, training and occupational choices or managing their careers (International Symposium on Career

Development and Public Policy, 2006). This shift is accompanied by changes from lifelong careers (fixed and hierarchical) to lifelong learning, and from career as elitist (only some people have careers; others have jobs) to careers for all (Watts, 2004).

Consequently careers guidance in schools is no longer just about providing information about options and encouraging young women and men to participate in tertiary learning or the workforce; it is about fostering individual progression and development (Watts, 2001). Crucially it is about encouraging *participation* as learner-workers and engaging young people with the ‘production’ and management of their careers (Vaughan and Roberts, 2007, original emphasis). Within the context of a knowledge society, career development provides a way that social and economic goals might be blended – a key theme at the 4th International Symposium on Career Development and Public Policy (2007).

1.2 Methodology

The EEL research team includes four research leaders, each with a different discipline background: Karen Vaughan (education); Jane Higgins (sociology); Hazel Phillips (indigenous studies) and Paul Dalziel (economics).² Preparation of this report began with each research leader undertaking a ‘structured review’ of the international literature in her or his discipline. A structured review involves designing a search strategy that determines how publications for the review will be: *identified* (deciding, for example, on which databases will be searched using what key words); *screened* as relevant or not; and *analysed* for important themes. At an early stage of the review, it became apparent that the search strategies for the education and the sociology literatures had a very wide area of overlap (the sociology of education) and so Karen Vaughan and Jane Higgins coordinated their work to avoid duplication. Consequently this preliminary work produced three annotated bibliographies focusing respectively on education/sociology, indigenous studies and economics.

The annotated bibliography of the indigenous studies literature was created using a kaupapa Māori methodology, which summarised the most important findings in what Hazel Phillips and Moana Mitchell describe as the four Cs – culture, context, congruence and coherence. This involved searching for references that recognised: the legitimacy and validity of being Māori, and of Māori aspirations, knowledge and practice; the legitimacy and validity of being Pacific Island, and of Pacific aspirations, knowledge and practice; accountability and reciprocity between researchers and research communities; and the tino rangatiratanga/self determination of Māori and Pacific communities to determine their own futures.

Jeffrey (2003) has described some of the challenges in performing genuinely cross-disciplinary research, and has also offered possible tools for effective collaboration. Based on Jeffrey’s suggestions, members of the research team engaged in a series of face-to-face meetings and telephone conference calls to discuss the results in their annotated bibliographies. These discussions focused on developing shared understandings of what each discipline means in its vocabulary and metaphors, in a manner that highlighted points of difference as well as points of agreement and complementarities. The research team was assisted in this task by feedback from its external reference group of policy end-users at a meeting of preliminary findings on

² The full research team also includes two research associates: Ben Gardiner (New Zealand Council for Educational Research) and Moana Mitchell (He Pārekereke). They are thanked for their work in preparing material for this review in the acknowledgements at the beginning of this report.

12 December 2007 and at a research seminar hosted at the Ako Pai Marae of Victoria University of Wellington (Karori campus) on 8 July 2008.³

An example may serve to illustrate this part of the research method. All three annotated bibliographies included material on ‘identity’ and ‘choices’. In the education and sociology bibliography, this included a wide range of material in which developing identity during the teenage years is viewed as a dynamic and sometimes turbulent process that can have profound impacts for better or for worse on the choices open to young people. In the indigenous studies literature, researchers have explained how identity and choice involve powerful communal processes in tribal communities that may be ignored or repressed in a young person’s school or workplace. This literature is also very critical of research that adopts ‘ethnicity’ as an explanatory factor for ‘outcome gaps’, as if being indigenous is itself a problem. In the case of the economics bibliography, the inclusion of identity was due to a single article that had explicitly set out to engage with sociology in research on education (Akerlof and Kranton, 2002); otherwise the research all tended to assume that individuals naturally assume an identity as rational agents making choices intended to maximise their individual self-interest.

At first sight, such different perspectives might suggest that producing a trans-disciplinary review is a hopeless task. As the conversation continued, however, and as the members of the research team deepened their understanding of the different perspectives, cross-disciplinary connections were made. The economics literature, for example, includes studies that have sought to explain how the absence of role models or mentors from a social group may lead young members of that group to limit their choices in unhelpful ways (Manski, 1993a; Chung, 2000; Oxoby, 2008). The sociology and education literatures include themes based on ‘pragmatic rationality’ that certainly do not ignore self-interest in decision-making (Hodkinson, Sparkes and Hodkinson, 1996; Foskett and Hemsley-Brown, 1999, 2001; Raffe 2003; Taylor 2005). The indigenous studies literature includes examples where a decision to leave school early is analysed by researchers as a rational choice by young people asserting agency against a background of demeaning treatment by their teachers (Romo and Falbo, 1996; Villenas and Deyhle, 1999; Powers, 2006; Bottrell, 2007). The research team was able to use cross-disciplinary connections such as these to begin a trans-disciplinary account of key issues for young people making education and employment choices in their transition years from school to work, described in the remainder of this report.

1.3 Structure of the Review

The review does not attempt to provide an exhaustive analysis of all literature in the project’s four disciplines; that is beyond the resources of the project. Rather, the report identifies key themes in the international literature that have been identified in our cross-disciplinary conversations so far as potentially important, including those that appear puzzling or contradictory across the disciplines. The report is therefore a ‘knowledge basket’ for the Education Employment Linkages research programme over the next four years.

Chapter 2 considers choice in education employment linkages. It begins with a presentation of the individual choice model of human capital investment that is at the core of the economics literature on this topic. This is followed by a review of the education and sociology literatures that have focused on the interaction between agency and structure under a general heading of

³ The external reference group is made up of nominees from seven government agencies: Career Services; Department of Labour; Ministry of Education; Ministry of Social Development; Ministry of Youth Development; Te Puni Kōkiri and the Tertiary Education Commission.

pragmatic rationality. The chapter concludes with a description of recent indigenous challenges to individual choice models.

Chapter 3 considers how identities are crafted by young people at the same time as they are making education and employment choices. Recent contributions have emphasised the complex and fluid nature of identities that have challenged earlier concepts of fixed identities developed in a clear-cut linear manner. In particular, recent scholarship suggests that identity is relational, multiple, contested and dynamic. This has implications for understanding how young people engage in education employment linkages and how formal systems can assist them in this process.

Chapter 4 considers discovery and development of abilities. Section 4.1 draws on research by Guy Claxton (2006), which emphasises the importance of enhancing young people's learning *capacities* to enable them to prepare for a life-time of change. This leads on to section 4.2, which discusses how making plans and setting goals (including identity work by the young people) can be important for successful youth transitions. Section 4.3 describes recent trends in the economics literature that models how education provides an opportunity for young people to discover and develop their abilities, as well as signalling their skills to potential employers by completing relevant qualifications. Section 4.4 warns, however, that completing a qualification does not guarantee rewarding employment outcomes, especially if the student does not have a genuine ability or interest in the field of study.

Chapter 5 considers opportunities and structures, identifying key themes concerning the ways in which young people's horizons for action can be shaped by their family, by the community contexts in which they live, and by meeting mentors or role models. It is universally recognised that families have a powerful influence on career pathway choices, and that young people growing up in low income or rural neighbourhoods can be constrained in their access to information and networks. One way of expanding opportunities that is particularly emphasised in the indigenous studies literature is to organise access to relevant mentors and role models who illustrate wider possibilities.

Chapter 6 considers systems linking education and employment choices. It begins with an overview of the different types of systems, from highly formalised in Northern Europe and Japan to the more decentralised systems in North America, the United Kingdom and Australasia. The chapter then discusses recent frameworks that have sought to strengthen linkages between schools and employers, particularly in promoting vocational skill development in the more decentralised systems. It finishes with a discussion of New Zealand's National Certificate for Educational Attainment.

Chapter 7 is a brief conclusion, drawing attention to the ways in which recent contributions to the education, sociology, indigenous studies and economics literatures have produced marked changes to our understandings of education and employment linkages during the transition years of young people. These new understandings provide solid foundations for the remainder of the research in the Education Employment Linkages research programme.

Chapter 2

Choice in Education-Employment Linkages

At the core of the EEL investigation into how formal support systems can assist young people to make effective education-employment linkages is the concept of choice: how do young people make choices about educational investment and employment opportunities, and what will assist young people to make choices likely to benefit themselves, their communities and the national economy?

Choice can be conceptualised in a variety of ways. Significant disciplinary differences exist, for example, between approaches that emphasise the role of individual agency in choice-making (as economics tends to do), those that emphasise structural conditions that constrain choice (as sociological and educational researchers tend to do) and those that incorporate community involvement in making choices (as is prevalent in indigenous studies research). The research team is interested in points of convergence and conversation among the disciplines and to this end this chapter explores some recent developments that suggest ways forward in a transdisciplinary discussion about choice in education-employment transitions.

In pursuing this conversation we are aware not only of conceptual differences, but also of language differences. As Jeffrey observes (2003, 548): ‘It can be appreciated that collaboration between the disciplines is hampered by the absence of a collective and comprehensible set of reference terms’. Jeffrey proposes the use of metaphor in transdisciplinary conversations as a means of attempting to access and develop common meanings. One of the key metaphors used throughout this report to describe movement between education and employment is ‘career pathways’. This recognises that many young people in transition are unlikely to have a single employment destination in mind when they leave school, and are increasingly likely to plot a course through a variety of education and/or employment locations, sometimes, but not always in a generally desired direction in keeping with at least some of their aspirations.

‘Pathways’ is already widely used throughout the literature in a variety of ways (ACER, 2001). In a useful commentary on the adoption of the term in youth transitions research and policy, Raffe (2003, p. 4) warns that ‘the metaphor of pathways is imprecise; it can be used in different ways and to express different meanings’. We have used the term broadly at this early stage in our interdisciplinary conversation as a way to encompass two settings:

- institutionalised relationships between education and employment designed to accommodate transition, that is, formal pathways that are often the subject of ‘pathways engineering’ by policy makers in pursuit of various educational and labour market objectives (Raffe, 2003); and
- the pathways that young people themselves construct using both formal and informal relationships between education and employment.

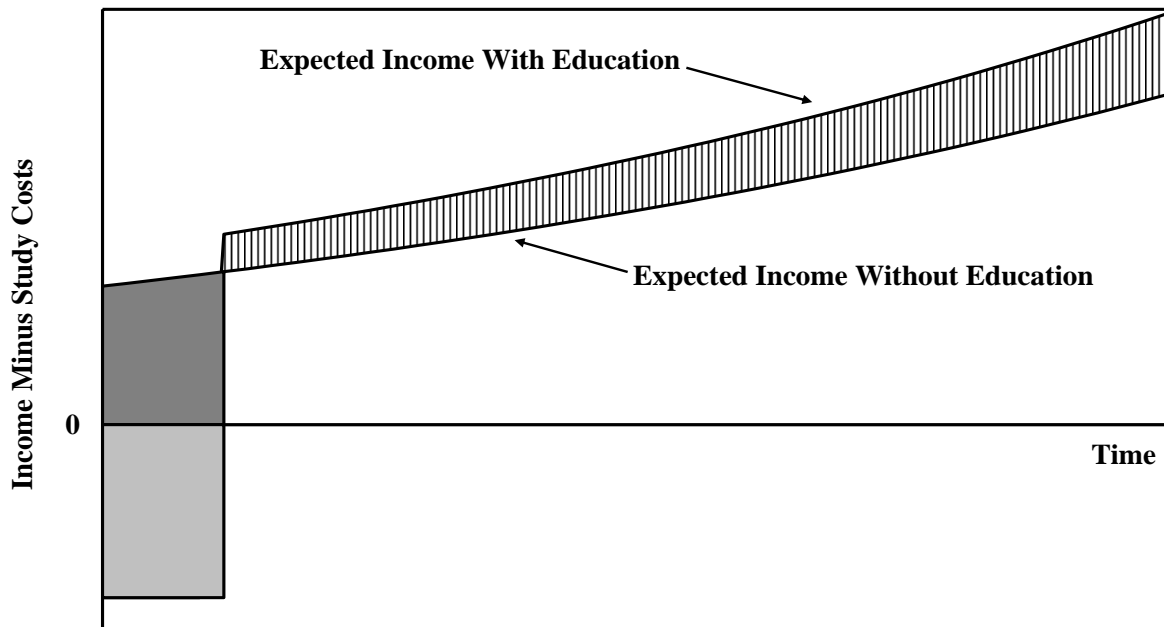
Reflecting this distinction, Raffe (2003) reserves the pathways metaphor for a policy-makers’ perspective of formal linkages, and uses the term ‘navigations’ to refer to the perspectives of the young people who use the pathways. At this stage we use the same term for both

perspectives in recognition of what appears to be an increasingly destandardised approach to transition in many countries, that invites (for better or worse) active and on-going construction of transition by young people rather than the pursuit of an already established institutional path.

2.1 Individual Choice

Following the foundational contributions of Shultz (1961) and Becker (1962 and 1964), education choices in economics have been modelled as investment decisions, in which individuals make economic sacrifices in order to acquire ‘human capital’ that will generate future benefits. Recent surveys of the literature based on this model have been made by Harmon *et al.* (2003), Sianesi and Van Reenen (2003) and Tobias and Li (2004). Figure 1 illustrates a simple example to introduce the main elements in the Shultz-Becker human capital model. The figure draws two stylised time series of an individual’s net income (that is, after paying taxes and study costs) over their working life. The first time series records the person’s expected after-tax salary each year, assuming that the individual chooses not to enrol in further study. The second time series begins with a period of negative values, during which the individual is engaged in full-time study. During this period, the person is not earning a wage and is paying tuition and other costs of study. Once the person graduates, however, he or she will expect to earn a higher income than someone who has not studied.

Figure 1
Costs and Benefits of Education



In this example, the expected benefits of education for employment are represented by the vertically shaded area showing the difference between the expected incomes with and without education after graduation. There are two costs of the investment in education: the fees and other costs of study (the light shaded area); and the opportunity cost of foregone income during the period of education (the dark shaded area). A necessary condition for a person to choose

education as an investment good is that the net present value of the benefits is not less than the net present value of the costs (where net present value is a standard technique used by economists to compare costs and benefits that occur at different times).

It is not a sufficient condition, however, since other constraints may prevent an individual from making their preferred choice. In Figure 1, people who choose education for employment must survive a period when their net income after study costs is negative. If young people have no access to credit or savings, this may limit their choices to options in which net income is always positive. If so, they will not be able to enrol in study even if the net present value of the benefits is greater than the net present value of the costs. This analysis provides part of the economic case in favour of a government-sponsored student loans scheme for post-compulsory education, although it must be said that the United States evidence suggests that credit constraints do not affect the choice to enrol in post-compulsory education (Keane and Wolpin, 2001; Cameron and Taber, 2004).

Another potentially important constraint is access to information, perhaps mediated through family influences and neighbourhood networks that often reinforce each other. This will be considered further in chapter 5 of this report, but Gaviria (2002, p. 331) captures the flavour of the literature on family background in a way that perhaps only an economist could: 'If one were to summarize the main message of the massive scientific literature dealing with family influences, a single line would suffice: it pays to choose one's parents.' Ludwig (1999, p. 17) summarises his own research project on this topic as follows:

All adolescents seem to implicitly underestimate the educational requirements of their occupational goals, and teens (particularly males) in high-poverty urban areas have less accurate information than those in other neighborhoods. Information varies across neighborhoods in part because of the effects of family socioeconomic status on information, including the education and employment experiences of parents.

A characteristic of this traditional economics approach is that it models a single choice being made at a single key moment in the young person's transition into the labour market. The model can allow for the choice to take some time to be finally settled, but the essence of the approach is that at some moment the choice-maker calculates the benefits and costs of further investment in education and on the basis of that calculation makes a final rational choice (recognising multiple family and social influences on the individual's choices). More recently, models have been produced that treat human capital decisions as sequential choices, repeated year after year. These models recognise that people do not make a unique choice to undertake a certain level of lifetime investment in education, but every year weigh up their options about education and employment as they explore career pathways.

A major breakthrough in this approach came with the stochastic dynamic programming model of Keane and Wolpin (1997), which Belzil has been described as 'most probably the most important contribution to the empirical schooling literature since Willis and Rosen (1979)' (Belzil, 2007, p. 1076; see also Eckstein and Wolpin, 1999). In the model, each individual makes an education or employment choice every year beginning at age 16, with five alternatives: (1) participating in education; (2) working in a white-collar occupation; (3) working in a blue-collar occupation; (4) working in the military; or (5) engaging in home production. The model allows for a number of contributing factors such as: skill depreciation; experience in the first year of a new occupation; age effects; high school and college graduation effects; additional costs from changing occupations; non-pecuniary rewards in different occupations; consumption value of being at school, which varies with age; costs of returning to

school after dropping out; age effects on the benefits from remaining at home; extra psychic benefits from completing a high school or college diploma; and an additional costs of leaving the military prematurely. The authors report that this extended model does a good job of fitting data gathered in the United States from the youth cohort of the National Longitudinal Surveys of Labor Market Experience (NLSY).

The mathematics and econometrics required to estimate this and earlier generations of human capital choice models are very advanced, well beyond the ability of any secondary school student. Consequently, there has been some criticism about the realism of these models. Noting the extensive debate among economists about methods and results, Manski (2000, p. 119), drawing on Manski (1993b), asks rhetorically: ‘If experts disagree on the returns to schooling, is it plausible to assume that youth have rational expectations?’ An answer to that question has been posed

and ethnicity that they bring to their decisions about post-school pathways. As such these decisions appear to come ‘naturally’ to them and thereby to frame what is ‘possible, desirable or appropriate’ (Archer and Hutchings, 2000; Reay *et al*, 2001; Ball *et al*, 2002a; Lawy, 2002; Archer and Yamashita, 2003). The model of pragmatic rationality has three interlocking dimensions:

- decision-making is a process, not a one-off event, and is part of the life course;
- decision-making about a post-school path is part of a wider lifestyle choice and is strongly shaped by context (class, for example) and by culture;
- decision-making is a social process, taking place in interaction with others, so that the actions of others, besides the individual making the decision, will shape this process.

In developing their thesis, Hodkinson *et al.* (1996, p. 141) argue against the assumption, present in some earlier transition writing, that ‘beyond the transition point the future career trajectory is knowable and often known’. They argue instead that transition is constituted by a number of distinct turning points, moments of choice, interspersed with periods of routine. Turning points are periods when significant, pragmatically rational career decisions are made. ‘At a turning point, which may be of short duration or extend over a period of time, and which may be recognised at the time or only with hindsight, a person goes through a transformation of identity’ (p. 142). These turning points are variously constituted: they may be structural, that is, embedded in the transition infrastructure (e.g. the end of compulsory education);⁵ they may be external, beyond the young person’s control (e.g. changes in the labour market); and they may be largely self-initiated (e.g. related to a decision to form a relationship or leave the family home). They may of course be combinations of all of these.

This concept of pragmatic rationality has been taken up and extended by others. Foskett and Hemsley-Brown (1999), for example, argue that perceptions of reality rather than objective reality are important in pragmatic rationality. They cite research evidence that suggests the formation of ideas and images about different careers begins as young as five years of age and comes from a range of sources including: getting ideas about jobs by observing people in them; talking with adults who have their own perceptions of these jobs; and picking up images of jobs through the media.

Perceptions of careers change as individuals age: they learn more about what is involved in a particular career, and also about their own strengths and limitations in relation to these careers (Helwig, 2004). Foskett and Hemsley-Brown (1999) propose a landscape analogy for understanding how perceptions of career and career paths can develop. They envisage career paths as journeys through a changing landscape in which one’s location affects one’s view of the total landscape and one’s perspective of different elements of it. They argue that this analogy is a useful reminder that the relationship between a person’s skills and aptitudes on one hand, and the career(s) he or she may eventually adopt on the other, are not necessarily simple or straightforward. Culture, life history, bounded horizons for action and the influence of significant others (especially family and teachers) all shape approaches to the landscape and pathways through it. This model suggests that an important part of the work of a careers educator is to help young people navigate this landscape. This may involve helping them:

⁵ See Higgins and Nairn (2006) for a discussion of the New Zealand transition infrastructure in the context of the life course literature such as Heinz and Kruger (2001).

- to interpret what they see (e.g. the different types of jobs; how some are connected to others; the different routes available to travel towards different jobs);
- to understand the experience of travelling through, living on and viewing the landscape (e.g. what might be involved in undertaking a particular education or training path; what are the experiences of people who have followed that path and are now working in those jobs; and what other jobs become open to someone who has moved into those jobs); and
- to challenge fixed ideas by encouraging a broadening of horizons so that individuals can see ‘what’s out there’ rather than simply following choices made at a younger age.

Of course it may not only be the young people involved who should be encouraged to broaden their horizons. Literature in the field of indigenous studies has highlighted ways in which forms of institutional racism are in play for some young people attempting to navigate the careers landscape. Parente *et al.* (2003) and Helme (2005), for example, observe that the careers education systems in the Australian schools they studied were not well adapted to the needs of young indigenous Australians: these young people were consistently poorly informed about career pathways and were not well assisted to develop career pathway strategies in terms of their career aspirations.

In Helme’s study, these young people were consistently counselled into vocational education choices by their teachers even when they displayed high levels of academic achievement. Groome and Hamilton (1995, cited in Helme, 2005) reached similar conclusions, as did Villenas and Deyhle (1999) in their review of ethnographic research on Latino/a youth in United States schools. This raises the issue of who interprets the landscape and plots the pathway through it. Later chapters of this report consider the growing literature on the importance for young people of developing their own learning capacities in career development rather than having to rely on the interpretation of information by others.

One of the drawbacks of the landscape analogy, of the pathways language and (potentially) of the pragmatic rationality approach, is that they may suggest that young people are always in some sense purposive in their approach to education-employment linkages. This is clearly not always the case, for a variety of reasons. As already mentioned, young people’s horizons are shaped by structural factors, particularly class, ethnicity and gender. These bounded horizons may make certain pathways appear ‘natural’: class location may, for example, lead some young people to expect to go university and others to expect not to, without significant reflection on why this destination is being pursued.

It may also be that the pragmatism involved is very pragmatic indeed. In their study of young Londoners in transition from school, Ball *et al.* (1999), adopting the Hodkinson *et al.* (1996) model, found that sometimes the pragmatism employed in a career pathway decision operates on a very short time horizon, on very little information and/or in the context of considerable instability in life circumstances: ‘unresearched, unstable or desperate choices [about post-16 destinations] were sometimes turned into firm decisions about routes and courses by the pressure of time, chance interventions or the influence of significant others’ (p. 209). They also found that, for a group of their participants, the pragmatics of coping in their current circumstances intervened in education-employment decisions, leading to situations in which these young people became ‘choosers otherwise’, that is, those who have chosen other than to enter into post-school education, training or employment (p. 202):

... for some of our young people, employment and education are at least secondary to, sometimes totally irrelevant, for extended periods, compared with other more pressing or more engaging aspects of their lives – relationships, leisure activities, pregnancy, coping with poverty, and surviving social and personal distress.

These young people are often referred in policy documents as NEET (not in employment, education or training). As Furlong (2006) observes, however, this categorisation risks oversimplifying the circumstances of a group of young people in diverse situations, some of whom have access to considerable resources and a wide range of choices, while others may be highly vulnerable and in need of assistance. The NEET categorisation also ignores a group of a highly vulnerable young people employed in precarious work who might benefit from policy attention and intervention.

2.3 Indigenous Challenges to Individual Choice Models

When considering choice, the pathways language, economic models and the pragmatic rationality approach all tend to conceptualise agency in ways that either suggest, or are firmly based on, the primacy of the individual, even in a context of constraint. Developments in indigenous studies research challenge this focus in important ways.

Research by Parente *et al* (2003) and Hughes and Thomas (2005) in an Australian context has highlighted the importance of career development programmes using frameworks that are culturally appropriate for the young people they are intended to assist. Hughes and Thomas (2005, p. 41) note the ‘potential inappropriateness of theoretical perspectives that reflect an individualist cultural value orientation for the career development of all students’. They argue that such approaches tend to be the dominant approaches in many schools and observe that ‘the individualist characteristics of freedom to pursue personal goals, primacy of personal goals over ingroup goals and freedom to do one’s own thing suggests that a decision making style reflecting self reliance and personal responsibility for career related choices is desirable’ (p. 44). In contrast, a more collectivist approach would recognise that for many young people (from, much of the globe, e.g. the Pacific, Asia, Latin America) decision-making may involve recognition of the interdependence of the self and the collective, including subordination of individual goals to group goals, and the importance of the values of duty and obligation over the primacy of the individual (see also Shafer and Rangasamy, 1995, and Arthur and McMahon, 2005).

Parente *et al.* (2003) offer a good illustration of this in their study of the aspirations and career development practices of indigenous and non-indigenous school students in three Australian states. They found that indigenous students, in comparison to their non-indigenous peers, were more likely to ‘be motivated to work for altruistic reasons as opposed to financial rewards, ... return to their communities after undertaking post-school options, and have a cultural attachment that is actively maintained through continued contact with their communities’ (p. 6). Arthur *et al.* (2004) make a similar point about young Torres Strait Islanders observing that these young people will generally prioritise family commitments in their decisions about, and work towards, career pathways (see also Villenas and Deyhle, 1999, and Munns and Parente, 2003).

A further challenge to the models of decision making discussed earlier in this chapter picks up on the concept used by Ball *et al.* (1999) of ‘choosing otherwise’ and the possibility that sometimes those who ‘choose otherwise’ do so in an agentic and purposive manner (for example, Taylor, 2002, and Ross and Gray, 2005). Leaving school early may, for example, be

a purposeful response by indigenous young people to mono-cultural and ethnocentric schooling systems. As Powers (2006, p. 28) observes of young Native Americans:

Dropping out of a school that is fraught with cultural discontinuities and conflict is not only sagacious, but for some American Indian adolescents, it represents an act of resistance to a historically oppressive educational system.

Villenas and Deyhle (1999) in their review of ethnographic research on Latino/a youth in US schools, and Bottrell (2007) researching a group of young Indigenous and working class Australians, reached similar conclusions. For example, the former cite a study by Romo and Falbo (1996, p. 253) which concluded:

Many students in our study made a reasonable decision when they decided to drop out. They were correct when they realized that school was wasting their time. They recognized that they were gaining few marketable skills in school. They felt demeaned and demoralized by the way teachers and other school personnel treated them. Getting pregnant, working dead-end jobs and even staying home and watching TV offered more satisfying alternatives than school.

The choices of young indigenous people thus may not fit neatly with standard models of choice. An extensive literature regards them as being 'at risk' and/or in some way deficient because of this (Bottrell, 2007; Kelly, 2000). The problem with this approach is that it fails to understand these choices in terms of the aspirations, world views, values and practices of these young people and their communities.

Chapter 3

Crafting Identities

It's about discovering who you are and developing some confidence along the way to work out what you want and how you are going to get there. (Participant discussing career choices in Dwyer *et al.*, 2005, p. 33)

The discussion in Chapter 2 identified some of the complexities in current understandings of how young people make education and employment choices. This discussion has suggested that choice-making about career pathways:

- is generally a process rather than a single event;
- involves more than a calculation of expected financial returns; and
- tends to be part of a wider set of choices about a desired or anticipated lifestyle.

In effect, young people are reworking the commonly asked question 'what do you want to do when you leave school?' into the broader question, 'who do I want to be?' Two examples illustrate the point.

Taylor (2005) asked young men in seven schools in Australia why they were interested to work in the construction industry. They cited diverse reasons including that they wanted jobs involving physical work outside, with co-workers who would be mates, in an environment of relative freedom and sociability, and that fitted with the kind of physically active lifestyle they enjoyed. They had no interest in in-door computer-based work. They were also clear that they sought long term job security and the possibility of being associated with a single industry and even with one employer over the long term.

The Pathways and Prospects project of the New Zealand Council for Educational Research interviewed a group of young New Zealanders recently out of school in a range of education and training situations (Vaughan, Roberts and Gardiner, 2006). Among those who had a career pathway in mind, a significant number described how the content of what they were doing was sometimes less important to them than the chance it gave them to think about the kind of person each had been, was becoming and might be in the future. Each had a clear and sometimes highly detailed idea of the pathway he or she wanted to follow, including outdoor leadership, business, food preparation, freelance creative work, education and the army. These pathways were not necessarily linked to arriving at a particular job in the future, but they were associated with becoming a particular kind of person with certain skills and interests.

The young people in these examples are typical of young people in many studies who are exploring particular pathways because these suit the sense of identity that each individual has or would like to have (Meijers and Wesselingh, 1999; Helwig, 2004; Arnett, 2007). This is not to claim that young people who are still at school, or who have recently left school, have 'answered' the identity question. On the contrary, a great deal of the literature on youth transitions now conceptualises identity not as a state definitively arrived at, but as relational,

multiple, contested, and dynamic, particularly because these young people are engaged in 'border crossing' from childhood to adulthood (Wyn and White, 1997; Ball *et al.*, 1999; Archer *et al.*, 2000; Reay *et al.*, 2001; Ball *et al.*, 2002b; McDowell, 2002; Archer and Yamashita, 2003). Nor is this to claim that young people are able to 'pick up' and 'put down' identities at will. Rather identity work takes place in, and is shaped by, specific contexts: cultural, economic, social, political, ideological, geographical and so forth. Within these contexts, identity work is concerned with the management and negotiation of opportunities and constraints.

This complex and fluid understanding of identity challenges traditional models of career decision-making by proposing that identity is neither fixed (as in trait theory) nor linear (as in developmental theory). Trait theory is based on matching certain personal qualities and aptitudes with certain jobs (Osipow, 1990) while developmental theory takes a more evolutionary view; Bukdnytė and Lemeđiūtė (2006), for example, use a number of measures to determine that a majority of the 110 secondary school students in their sample in Lithuania were not ready to make decisions as they were at 'lower identity formation stages'.

3.1 Conceptualising Identity

The discussion about choice in Chapter 2 supports an exploration of this more fluid conceptualisation of identity. This section considers briefly what the literature on identity means when it suggests that identity is relational, multiple, contested, and dynamic.

Identity is Relational

Identities are forged within families and communities, among peers and within institutions (see Wyn and White, 1997, for a useful overview). Bottrell (2007, p. 608), for example, refers to her young Koori participants gaining a 'sense of belonging through claiming and "being owned" by' their people. Ball *et al.* (2000, p. 73) refer to a group of their white, middle class, female participants as having aspects of their identities 'heavily invested in "school"' and middle class family expectations. Anae (1998) explores the dynamic interaction between church, culture and identity for young New Zealand born Samoans for whom to opt out of church was regarded as a temporary opting out of Samoan identity.⁶ Archer and Yamashita (2003, p. 61) refer to the way the young working class men in their United Kingdom study drew on their peer group to construct identities that privileged 'hardness', 'coolness' and an 'anti-school work' attitude, the participants differentiating between themselves – 'bad boys' – and others who were 'proper clever' and 'goodies'.

Identity is Multiple

Ball *et al.* (2000, p. 24) argue that 'post-16 "choices" are bound up with the expression and suppression of identities'. Their UK participants saw these choices as 'one aspect, of varying importance, of the sort of person you may become'. This alerts us both to the multiplicity of identities that young people construct and experience, and also to the possibility that some identities are more important than others. While young people may have 'learner' and, possibly, 'worker' identities, these may not be the most important to them at the time when they are expected to be considering career pathways. Ball *et al.* cite Apple's (1986, p. 5) observation

⁶ For New Zealand literature on young Pacifica identities see also, Fogarty (1992), Lloyd (1995), Fusitu'a and Coxon (1998), MacIntyre (1999), Tupuola (1999), Dickie (2000), Manu'atu (2000) and Fa'afoi and Fletcher (2001). For New Zealand literature on young migrant and refugee identities see Abdi (2003), Chung *et al.* (1997), Humpage (1998a, 1998b and 2000b), Guerin *et al.* (2003) and Evolve (2005).

that ‘we do not confront abstract “learners” ... instead we see specific classed, raced and gendered subjects, people whose biographies are intimately linked to the economic, political and ideological trajectories of their families and communities, to the political economies of their neighbourhoods’. Other identities come into play: the cultural and familial, as well as those deriving from youth subcultures in music, fashion and leisure (Furlong and Cartmel, 1997; Zemke-White, 2001; Gelder, 2005).

Identity is Contested

Because identities are relational and multiple, they can also be contested. Valentine (2000, p. 258) argues that young people are often ‘strung out between competing definitions of their “identity” emanating from home, from school and from wider society (where in each context particular different expectations, norms and rules may be at stake)’. Bottrell (2007, p. 608) observes that the identities of her young Australian participants are both ‘chosen’ and ‘unchosen’. For this group of young indigenous and working class Australians: ‘struggles to be, and be seen as, who they are, may be seen as struggles *for* chosen, and *against* unchosen, social identities’. These young people were known as “refusers” or “challenging” at school, and as “delinquents” and “criminals” in authorities’ characterisations, but in their own neighbourhoods they are described by parents, peers and neighbours as “good kids”’.

Identity is Dynamic

Identities are fluid, not fixed, particularly for young people moving between childhood and adulthood, and across cultures. The European Group for Integrated Social Research (EGRIS, 2001) offers a useful summary discussion of the ways in which many youth researchers in Europe are writing about youth transitions as non-linear, destandardised and fragmented. They observe that, in forging biographies and identities in transition, young people shift continuously between youth and adulthood; experience ‘uncertainties, fluctuations, discontinuities, reversals and seesaws’; develop patchwork lifestyles’ and undergo ‘the ups and downs of fragile and reversible transitions’ (EGRIS, 2001, pp. 103-4). Wyn and White (1997), Wyn and Dwyer (2000) and Dwyer *et al.* (2005) have also written extensively about the non-linear nature of youth transitions and youth identity development.

The fluidity of youth identities occurs not only across the child-adult border, but cross-culturally for many young people. Tupuola (1998 and 1999) for example, describes how young New Zealand born Samoans experienced their identities as highly complex and shifting, not between just two cultures but among many. When asked about their ethnic identification they described themselves variously as: New Zealand born Samoan, Samoan, Kiwi, Nui Sila Samoan, multiethnic, Polynesian, Welsh Samoan, Samoan Māori, European Samoan, and New Zealander.

Belinda Borrell (2005) has undertaken research with young Māori living in South Auckland about identity.⁷ Her work emphasises the *diversity* and the *range* of strong Māori identities that are being created by these rangatahi, based on deep connections to their local places and communities, a collective spirit from shared deprivation and affiliations with Pacific cultures. In particular, Borrell warns against using conventional labels of ‘Māori’ or ‘not Māori’ to describe rangatahi identity. While knowledge of Māori language and culture remain important

⁷ See also an account of the wider research project in the *Whariki 2005 Report* (p. 9) available at www.shore.ac.nz/news/whariki.pdf. Ministry of Women’s Affairs (1993) is an older but good report about what sort of resources or career guidance models work best for Māori students.

for many, Borrell argues that the use of hip hop, for example, to express pride in your street, in your neighbourhood and in your community is also about being Māori and being connected to tribal societies in a new non-tribal setting.

3.2 Youth Identities and Education Employment Linkages

This understanding of the complexity of youth identities has implications for understandings of how young people engage in education employment linkages and how formal systems can assist them. Akerlof and Kranton (2002), for example, argue that, through their systems of rewards and punishments, schools communicate to students what an ideal student identity should be. They observe that those who identify with this ideal are likely to fit in and do well; those who do not are likely to struggle to belong and even to stay in school. Extensive literatures in education and sociology make a similar observation regarding cultural capital in education (Bourdieu and Passeron, 1977). Since the 'ideal' identity that many schools tend to communicate is associated with the majority culture and dominant social class of their society it is not surprising that students who belong to neither are the ones most likely to take on the identity of 'school resister' and be given the unchosen identity of being 'challenging' or 'a failure'. Thus Bottrell (2007, p. 605) observes that in her Australian study 'students and teachers are very clear about who is successful and who is not. ... The understanding the girls construct out of their experience is that they are "not worth bothering about"'.

This can start very early. Villenas and Deyhle (1999, p. 429) cite a study by Valdés (1996) of Mexican American children in kindergarten whose teachers were concerned about the cultural and linguistic differences displayed by these children and expressed the hope that, in the words of one teacher about one of the children: 'she might snap out of it, she's got it in her, all she has to do is realize she can do it, she can snap out of it, you know. It's just something that hasn't clicked yet'. But even those who stay on until their senior school year can be made to feel they do not belong; some students in a recent New Zealand study commented that, in their senior year 'it [was] like "well if you're not going to university, you shouldn't be here" kind of thing' (Nairn *et al.*, 2007, p. 361, see also Munns and Parente, 2003, and Foskett *et al.*, 2004). In choosing post-compulsory education choices, Dale and Krueger (2002, p. 1524) have counselled that it may be important 'for families to consider the fit between the particular attributes of their children and the school they attend'.

The literature on mismatch between schools and young people who 'do not fit' is extensive. A significant proportion of this, particularly research focussing on young indigenous and ethnic minority people, is located within a deficit framework that conceptualises these young people as 'at risk', locates this risk primarily at the individual or ethnic community level, and is concerned with risk management and the unpredictability of these young people in terms of their decision making with regard to school leaving and job choices. A more interesting and important question is this: given the importance of identity to young people's experience of education-employment transitions, how can the understanding of youth identities outlined in the previous section inform our research question about helping young people make effective education-employment choices?

The relational nature of identity is highlighted in a range of literature concerned with young people's successful engagement with education. It underpins Bottrell's (2007, p. 599) discussion of recognition of identities, for example, which argues that 'recognition may function as a mechanism for privilege or marginalisation by differentiating young people through the relative valuing of differences and distinction'. Recognition requires relationship, and there is a growing literature on the importance of relationships of recognition between

young people and their teachers, career counsellors and other support staff in educational settings. Bishop and Berryman (2006), for example, studied the experiences of Māori students in New Zealand schools. They found that a key factor associated with effective learning relationships was that the teacher cared for the student as a culturally located human being. The Māori students involved in this research ‘spoke passionately about their desires to achieve within the education system [but] were just as adamant that this should not be at the expense of their Māori identity’ (p. 264). The researchers conclude that effective learning relationships for Māori students involve ‘the teacher creating a culturally appropriate and responsive learning context, where young people can engage in learning by bringing their prior cultural knowledge and experiences to classroom interactions, which legitimate these, instead of ignoring or rejecting them’ (pp. 264-5).

Atweh *et al.* (2007, p. 9) similarly argue in an Australian context that school disengagement can be seen as a failure of relationship resulting from ‘alternative and possibly conflicting perspectives, needs and frames of reference between students on one hand and their teachers and schools on the other’. They further argue (as does Bottrell, 2007) that in disengaging, students are not necessarily rejecting learning but they are rejecting what is taught (and how it is taught) in school.

Schwab (2001) cites two examples of Australian schools that have recognised students’ cultural identity and have been successful in engaging senior students. Booroongen Djugun College in New South Wales has developed ‘an explicit emphasis on the value and importance of Indigenous culture and identity, reaffirmed by the involvement of Indigenous staff, local elders and community leaders’ (p. 4). St Mary’s College in Broome, Western Australia, offers programmes closely linked to the local Aboriginal community and to local industries in which indigenous people have high levels of involvement. Unlike many secondary schools in Australia, both of these colleges succeeded in engaging indigenous students, retaining them into their senior college years and assisting them with career development, including post-school education and employment. Schwab argues that this was possible because both recognised that success in education relies on ‘cultural fit’, defined as ‘the alignment of curriculum, delivery and pedagogy with local Indigenous cultural assumptions, perceptions, values and needs ... in a learning environment that preserves and reinforces Indigenous identity and provides a range of culturally appropriate mechanisms of support’ (Schwab, 2001, p. 7). Defined in this way, the concept of cultural fit is recognisable (if differently labelled) in a great deal of literature on social class and education as a dynamic that feeds the differential success of middle class children in schools organised according to middle class cultural capital.

Some have argued for such an approach specifically in careers education. Long (1999, p. 5), for example, commenting on the importance of culturally sensitive career planning/ counselling among young Native Americans, observes that ‘many career counselling approaches ... have failed because of an absence of consideration for traditional values and the effect of culture on vocational decisions’. He calls for an understanding by career counsellors of differences within the Native American population, as well as among different ethnic groups and argues that students should be allowed to express their own ideas and beliefs in relation to career decision making. He suggests that career educators should have an appreciation of who should be involved and informed in the process of career counselling and vocational preparation; this may involve the inclusion of a wide network of people from students’ communities in any transition programme (see also Hughes and Thomas, 2005).

Just as the recognition of identities is based on sound relationships with significant others, so an emerging education literature on career decision making suggests that those significant

others who help young people make decisions should be aware of the dynamic nature of youth identities. This approach differs markedly from traditional trait theory which suggests the fixity of identity. Rather, emerging literature suggests that effective education for employment is based on enabling young people to undertake the identity work necessary to understand themselves in changing contexts. This literature, which focuses on enhancing young people's learning identities and capacities, is the subject of the next chapter.

Chapter 4

Discovery and Development of Abilities

Education has long been considered central to young people's discovery and development of abilities and aspirations. Guy Claxton's pioneering work argues that brain science shows that learning is hard wired in human beings and has little to do with conventional ideas about intelligence or educational success. Claxton draws on research from a range of disciplines (cognitive neuroscience, experimental psychology and sociocultural studies) to advocate educational approaches that foster young people's 'learnacy' (Claxton, 1999), 'learning muscles' and 'learning stamina' (Claxton, 2004), and 'learning power' (Claxton, 2002), enabling them to become lifelong learners. This means much more, however, than 'a narrow focus on ... the continual updating of vocational knowledge and skills' (Claxton, 2006, p. 2). Rather, in fostering lifelong learners it is the task of education to strengthen young people's ability to be 'good choosers, skilful problem-solvers and powerful learners' (ibid). This chapter focuses on what and how young people learn about their abilities and the possibilities created by their abilities for their transition from school to work.

4.1 Developing Learning Capacities

Claxton's (2006) key argument concerns the importance of enhancing young people's learning *capacities* to enable them to prepare for a life-time of change. His approach challenges some traditional (and even some recent) understandings of learning. He argues that young people are not helped when learning is understood purely in terms of achievement, the pursuit of which is often related to policy makers' concerns with raising standards. He also argues that improving students' learning means more than *supporting* their learning (helping them to learn better); it must mean *expanding* their learning *capacity* (helping them to be better learners). And he argues that identifying students' learning styles (e.g. the 'kinaesthetic learner') can be limiting rather than expansive for a student if he or she is simply told that this is the type of learner they are. In keeping with Claxton's approach, a distinction can be made between 'learning', which is often conceptualised in terms of processing information, and 'learning capacity' (or 'learning power') which relates to student identity as a learner.

Students who think of themselves as learners are likely to track their own development and create their own learning targets. Claxton argues that teachers can cultivate learning capabilities by expanding learning dispositions, and part of this development must recognise the importance of learning dispositions as different from simply learning skills (Claxton, 2006, p. 7):

To become more disposed — to develop the disposition — involves two kinds of learning in addition to mastering the skill. First, we can broaden and refine our sense of when it is appropriate to use this particular ability (to become more ready). And secondly, we can strengthen our inclination to make use of the ability regardless of whether other people are encouraging us (to become more willing). So when we talk of dispositions, we are not talking about a new kind of psychological entity that needs to be distinguished from skills.... A disposition is merely an ability that you are actually disposed to make use of.

This is the thinking behind dispositions forming the mainstay of the New Zealand curriculum, with its focus on producing ‘confident, connected, actively involved, lifelong learners’ through the ‘key competencies’ of *thinking; using language, symbols and texts; managing self; relating to others; participating and contributing* (Ministry of Education, 2007). This raises potential research questions concerning the ways in which careers guidance (from counsellors) and decision-making (by young people) fit with ideas about lifelong learning, a knowledge society, and key competencies, which in turn fit with recent ideas about career development (workforce development, knowledge society, career management).

A lot of research relating to career choices focuses on young people’s learning only in terms of the processing of information about qualifications, skills, occupations, and tertiary education and training. Much of this research tracks and measures student aspirations, achievement, school leaver ‘destinations’, and progress along different pathways into further education and work. There is also a lot of research, often based in the areas of developmental psychology and occupational psychology, measuring career decision readiness and career self-efficacy among young people during, or leaving, school. In other words, the focus is on how well students have ‘learned’ work-readiness or developed certain career orientations (Gothard, 1998; Helwig, 2001; Repetto, 2001). However research explicitly measuring or analysing young people’s learning capacities or learning power in relation to career and work abilities, aspirations, and choices seems harder to find.

There is research which focuses on young people’s perceptions of work and ‘career’ (Gardiner, 2006; Vaughan, 2008b) and their (limited) perceptions of the relevance of school learning to career and work (Hughey and Hughey, 1999; Hipkins and Vaughan *et al*, 2005). There is also research which focuses on careers advisors’ understandings of career and the world of work, often showing (structural) inadequacies and making suggestions for better correspondence between careers guidance and workforce trends within a knowledge society, and their ability to teach or work with clients and students (Hoyt and Hughey, 1997; Vaughan and Gardiner, 2007; Duys *et al*, 2008). Particularly interesting is recent research focusing on relationships between young people’s ideas about career and work, their learning capacities, and their identities (Law *et al*, 2002; Lawy *et al*, 2004; Vaughan, Roberts and Gardiner, 2006; Stokes and Wyn, 2007). This research uses concepts such as ‘learning careers’ (Bloomer and Hodkinson, 2000; Ecclestone and Pryor, 2003) to draw attention to the ways in which young people construct a sense of self as a learner that changes over time and is mediated by the institutional structures in which they learn and which therefore impacts upon their view of work/career possibilities. In this literature, young people’s understandings of their own learning capacities are critical to their aspirations and ability to engage with particular education-employment linkages.

4.2 Making Plans and Setting Goals

As Claxton (2006) observes, once students think of themselves as learners, they are likely to set their own learning targets in line with their interests and aspirations. Part of working towards these learning targets involves making plans and setting goals. The research literature records a wide range of opinion among young people themselves about the difficulties or otherwise of setting career related goals:

It’s very important for people my age to have goals because if you don’t have goals you seem to lose sight of things and you don’t sort of have the ambition of being anybody and it is important to have goals so you can sort of work towards something. (Apprentice in Vaughan, Roberts and Gardiner, 2006, p. 44)

I think I've decided, about plan twenty-eight, I'll go to [university] ...our Careers Advisor's tried to be really helpful. But I just don't find anything helpful, 'cause I know about it, it's all just down to me. And they can't actually help 'cause there's just so many hundred options. (Rebecca in Higgins and Nairn, 2006, p. 217)

These two young New Zealanders, like many young people in the literature, report that it is important to have goals, but also that it can seem immensely difficult to make them. Research in sociology and social psychology has found that having work-related goals can help significantly in pursuing career pathways.⁸ This is not to say that goals about a specific job are needed but that goals relating to a career pathway, that is, to the transition from education and training into particular types of work, can be helpful.

Gianakos (1999) found that those who had such goals were more likely than those who didn't to establish themselves in a stable career pathway where they chose one job or a series of related jobs, but did not chop and change between jobs with no clear direction about which pathway they wanted to be on. Nurmi *et al.* (2002) found that those with goals were more likely to move into work that was a good match for the education or training they had done. These researchers suggest that purposive planning around career pathways was more likely among those who had identified career related goals.⁹ Such planning might involve:

- gathering information about particular career pathways, including identifying and talking with role models who may be at various stages in the pathway, and finding out about training options and employment possibilities;
- using this information to assess the demands and challenges associated with pursuing that path, including measuring these against one's own abilities and interests;
- problem-solving in relation to these demand and challenges; and
- addressing problems by identifying and marshalling one's available resources (both internal resources such as motivation and ability, and external resources such as identifying 'who can help' at home, at school, in the local community and more widely).

Hirschi and Lage (2007) use a 6-phase model to describe the way secondary students' career decision-making is refined over time: initial decision-making concerns about these decisions; generation of possible career alternatives based on own interests/skills/values through exploration; reducing career alternatives for more in-depth exploration; deciding among a few alternatives; confirming one's choices and building commitment to it; and being firmly decided and committed. The authors suggested that if career counsellors can identify which phase a student is in, they can then determine if they are 'career-ready' and assist them appropriately.

A series of approaching deadlines has also been observed to help individuals refine their aspirations into more concrete and achievable goals. Heckhausen and Tomasik (2002), for example, report on the decision-making practices of young Germans on a vocational track at school. This group has a deadline by which decisions about apprenticeships must be made. The study found that students entering the year in which they would make this decision often had both a 'dream job' and a 'vocation I am interested in' in mind, with the latter tending to be a

⁸ See for example, Gianakos (1999), Lapan and Kosciulek (2001), Nurmi *et al.* (2002), Lapan *et al.* (2003) and Bornholt *et al.* (2004).

⁹ Other researchers who have made this suggestion include Bornholt *et al.* (2004), Heckhausen and Tomasik (2002), Helwig (2004), Lapan and Kosciulek (2001), Lapan *et al.* (2003) and Okano (1995).

more realistic and accessible job than the former. As the deadline for applying for an apprenticeship approached students became more involved in information gathering and identity work. As a result of this work, students often found their dream job to be less promising than it first appeared in terms of career development; or that the grades they needed to achieve that job were out of reach; or that the 'interest job' was in fact a good choice in terms of career prospects, work autonomy and security of income. For these students, having a deadline for making a decision and approaching that deadline in an organised way in terms of information-gathering, identity work and so forth, encourages engagement with the kind of goal exploration work described above. A similar dynamic in a Japanese educational setting is described by Okano (1995).

Identity work appears to be a key element in this process. This work involves individuals discovering their own interests, finding out what they do well and what they enjoy doing, and identifying what they would be prepared to put effort into developing. Gushue (2005) comments on the cultural nature of identity work in relation to career decision-making. He found a direct and positive relationship between ethnic identity integration and career decision-making self-efficacy among young Latino/a students. The young people in his study gained confidence to undertake the work involved in career decision-making through experiencing success in negotiating their ethnic identity, and this in turn had a positive impact on their expectations of success.

Mahuika's (2007) review of the literature on gifted Māori students is relevant here because it highlights the cultural nature of interpretations of talents and abilities. In relation to the identification of giftedness among Māori students Mahuika warns against 'limited conceptions of giftedness, inappropriate identification policies and practices, low teacher expectations and negative deficit based stereotypes of Māori students'. This raises again the importance of relationships in the process of enabling young people to discover and develop their abilities (McCluskey *et al.*, 2005).

Without dynamic working relationships between careers educators and young people any amount of information gathering and recording of goals may founder. Mittendorffa *et al.* (2008) studied a school career guidance programme that used personal development plans (where students reflect on their own strengths/weaknesses and direct their own learning processes through setting learning goals) and portfolios (where students collect documents and evidence, illustrating progress towards a goals). These fit with competence-based approaches to learning, which prepare young people for a rapidly changing society. A majority of the teachers and counsellors perceived portfolios and personal development plans as instruments to collect evidence of student development, to stimulate self-responsibility or self-direction of students, to support students in reflecting on identity and future ambitions, and to set up learning goals to achieve this. The researchers found, however, that while portfolios and personal development plans were used instrumentally, they did not support career dialogues; students collected information about themselves, but because the information was not used in teacher-student conversations, students perceived them as irrelevant and became reluctant to use them to reflect on identity or future plans.

The importance of teacher-student conversations is reinforced by Germeijs *et al.* (2006) who studied young people who were chronically indecisive and anxious about career options. Participants had gathered plenty of information but were anxious because they were not sure this information was trustworthy. For these young people, the researchers suggest that seeking more information was unlikely to be helpful; instead careers educators or community mentors might help by working closely with students to investigate what they already know about

themselves and the different career paths they have looked into rather than offering them more information about possible choices. The researchers also recommended on-going support after the young people had made a decision.

It is noteworthy that in New Zealand provision of information is still often privileged by career educators at the expense of the development of self-management and career management skills, but this approach often fails to equip school leavers with the skills they need beyond *entry* to a course of study or the labour market (Vaughan and Gardiner, 2007). Australian research shows that students most valued a model of careers guidance in which careers counsellors spent most of their time acknowledging and working with them as individuals (or in small groups), and least valued careers counsellors who were information-centred or information-driven (Walker *et al*, 2006).

The identity work associated with setting goals and making plans may also involve individuals weighing up different sets of expectations placed on them (from school, parents, family/whanau and community) and considering how to work with these expectations in relation to their own aspirations. In some cases this may involve going beyond some of these expectations into unexpected fields. To do this some may find it helpful to tap into resources from a variety of places: developing useful relationships with role models in particular fields of interest, or mentors in the community may be a helpful place to begin.

4.3 Discovering, Developing and Signalling Abilities

Models developed in the economics literature have until recently tended to assume that individuals know their abilities when making education choices. At least since Roy (1951), economic models have assumed that individuals choose occupations in which they have a relatively high ability (or ‘comparative advantage’) based on their endowed talents (see, for example, Heckman and Honoré, 1990). Further, higher ability individuals find it less time-consuming to learn (Zietz and Joshi, 2005) and have lower risks of failure (Rochat and Demeulemeester, 2001). There is also some evidence that they receive a higher return to their investments in education (Weiss, 1995, p. 137; Harmon *et al*, 2003, p. 129). This means that people with higher ability tend to choose more education than people with lower ability.

An important class of models in economics, known as signalling or sorting models, assumes that individuals know their abilities, but potential employers do not (Weiss, 1995; Riley, 2001 pp. 459-463). Given that individuals with higher ability choose more education, employers demand higher qualifications to screen for higher productivity job applicants. This theory suggests there should be a premium to people who complete a qualification (because of its signalling effect) above the return to the years of education needed to achieve the degree. There is empirical evidence in support of this so-called ‘sheepskin effect’ (including for New Zealand; see Gibson, 2000), but Riley (2001, p. 460) suggests that this interpretation is challenged if education does provide human capital:

Presumably, those who drop out do so because they find the going tough and their grades are low. Thus, the productivity of the dropouts is lower than that of a representative individual from the class. When income is regressed against years of college education plus a “sheepskin” dummy, the latter picks up the difference in the rate of capital accumulation among dropouts and the rest of the class. Therefore, if data on dropouts are to be used as evidence, one necessary preliminary step is to provide a theory of why some students drop out.

The phenomenon of students beginning but not finishing an education programme is hard to explain within the standard economics paradigm. One explanation is that people may not always

know their abilities when they start a course, and that part of the purpose of education is to provide opportunities for people to discover and develop their individual interests and abilities. Manski (1989, p. 305) has called this aspect of education an ‘experiment’:

Now consider a student contemplating enrolment. At this point, the student does not know whether he has the ability to complete the program under consideration. Nor does he know whether he will find it worthwhile to do so. The only way the student can definitively determine whether schooling is for him is by enrolling. Thus, the decision to enroll is a decision to initiate an experiment.

During their studies students discover more about their abilities, what occupations their talents are best suited for, their interest in study relative to work, and the costs and benefits of further education (Altonji, 1993; Weiler, 1994; Anderberg and Andersson, 2003; and Arcidiacono, 2004). Based on these discoveries about themselves, students can revisit their initial study plans, perhaps changing their major area of study or leaving education to enter the labour force. Arcidiacono’s (2004) model, for example, has three periods. In the first period, school leavers choose either to enter the labour force or to attend college. If they choose to go to college, they also must choose the quality of the college and their major area of study. At the end of this period, students get feedback on their abilities through grades on their studies. At the beginning of the second period, the individuals who are at college decide whether to continue their education for one more period or to drop out and enter the labour force. If the former, they again make choices about their college and major, one or both of which may change from their previous decisions. In the third period, all agents are in the labour force earning income that depends on their qualifications (if any) and abilities.

This approach recognises that ‘failure’ in education need not always be a bad outcome. In an entrepreneurial culture, people should be encouraged to try new things and to explore their potential interests and abilities. If they learn in the process that they do not have an ability to do well in a particular course of study, this is important new information in their personal development. But if this is the case, they should not be advised to persist in their original plans; instead, the new self-knowledge about their abilities should be reflected in a new career plan.

A key idea going back at least to Rousseau (1762) is that education allows an individual to develop his or her abilities, raising those abilities to higher and more specialised levels. This insight means that the quality of education matters (Robst, 1995; Sianesi and Van Reenan, 2003, p. 159). Some programmes offer instruction by better teachers, for example, or a curriculum that is better connected to genuine employment opportunities. Some education institutions might also offer education to a more advanced level, or cover a greater range of material in the same time period. On the other hand, lower quality institutions might offer cheaper education, and so there can be a trade-off in choosing where to study, as described by Hilmer (1997, pp. 59-60):

In choosing a college, the prospective student has thousands of options to consider. Attending a higher quality university increases the benefit of a college education by increasing future earnings. Attending a higher quality university also increases the cost of attendance, however, since it entails a higher tuition and the student likely has to move further from home to attend. As such, college choice is a tradeoff between quality and cost.

This trade-off means that higher quality institutions tend to attract students who have above-average ability (Black and Smith, 2004). This means it is important when choosing where to study to consider the fit between a student’s abilities and the attributes of possible institutions (Dale and Krueger, 2002, p. 1524). Hilmer (2002, p. 461) explains:

The reason for this is that effective learning might depend on the quality of the match between a particular student and his or her classmates at a given school. As an example, consider a student who is far overmatched at his or her initial school. Being toward the bottom of the class, the level and pace of instruction might be high and fast enough to preclude effective learning. If so, the student might actually lag so far behind his or her classmates that he or she is able to learn less than if he or she were in a class with less talented peers even though that class would be taught at a lower level and slower pace. In such a case, transferring down to a lower-quality institution might actually facilitate better learning and more human capital accumulation.

This has led Hilmer (1997) to suggest that students who are unsure of their abilities might adopt a strategy of enrolling initially in a low-cost institution to discover whether they can succeed in studying a particular subject. If they find they can, they might then transfer to a more expensive, higher quality institution to complete their studies. More recently, Iwahashi (2007) suggests that students enrol in general education early in their career, in order to obtain more information about their innate abilities and so reduce uncertainty in their subsequent choices of more specialised education.

4.4 Matching Abilities to Employment Opportunities

Completing a programme of study is an important step towards achieving better employment outcomes, but a substantial literature warns that it is only a step. There is strong evidence, for example, that ‘the effects of finding employment related to one’s field of study are substantial’ (Grubb, 2002, p. 318; see also Grubb, 1997). An Israeli study of vocational education found that successful matching can increase annual earnings by up to 10 per cent (Neuman and Ziderman, 1999). A British study of graduates reported an earnings premium of between 8 and 20 per cent six years after graduation (Battu *et al*, 1999). A more recent Australian study reported returns to required education, if correctly matched to employment, of 18.2 per cent for men and 14.9 per cent for women (Voon and Miller, 2005).

This effect appears to differ depending on how much the learned skills are occupation-specific. Robst (2007, pp. 405-406), for example, reports from United States data that individuals who major in business management, engineering, the health professions, computer science, or law face more than a 20 per cent wage penalty for working outside their field of study, but the wage effects are small or insignificant in liberal arts, English, the social sciences and education. Consequently, Robst (2007, p. 406) specifically comments that ‘before choosing a major that focuses on occupation specific skills, students should be advised to make sure it is what they wish to pursue in their career [since] the cost to changing careers after getting the degree can be high’.

An outcome where workers end up in occupations where their qualifications are higher than necessary for the occupation, or where the qualifications lie in different fields, is known as education-employment mismatch. Economists have highlighted three potential explanations for this phenomenon.

The first possible explanation is that ‘should demand [for people with particular skills] prove insufficient or unresponsive to changes in relative supply, then workers may be forced to take jobs for which they are overeducated’ (McGuinness, 2006, p. 387). A young person may be aware of this possibility in advance of entering the education programme, but still decide that the risk of not finding a job in the chosen field is more than balanced by high benefits if matching is achieved. There is evidence that some young people are more willing to engage in risky behaviour than older people, and education choices that lead to uncertain employment prospects may be another example. This is not the only possibility, however; Grubb (1997, p.

239) observes instead that ‘it seems likely that many students are poorly informed about their choices and are mistakenly entering programs where the economic returns are insubstantial’.

A second potential explanation for education-employment mismatch is that workers with similar levels of education may have very different abilities so that ‘much of what is normally defined as over-education is more apparent than real’ (Harmon *et al*, 2003, p. 133; see also Hartog, 2000, and Chevalier, 2003). This explanation suggests that workers with lower than average ability are less likely to be selected by their employers for on-the-job training and promotion compared to their equally qualified but more able peers, and so end up with lower life-time earnings.

This possibility warns that further education is not an automatic passport to higher paid incomes, even if on average there is a high return to extra years of study (Carneiro *et al*, 2003). This is particularly important for policies that require unemployed young people to participate in labour market training programmes. Ryan (2001, p. 82) comments that ‘some programs make participants worse off during participation, while doing nothing for their labor market prospects, thereby violating the maxim, “do no harm”’. Other authors have argued that learners should be equipped with a critical literacy/social justice ability to read the real world, recognising that work-based training and/or apprenticeship schemes will not necessarily result in good work for young people (Lehmann, 2005). Matching education attainments to the person’s genuine interests and abilities is important.

The third potential explanation is that some groups of workers face structural barriers in the labour market (such as discrimination based on class, ethnicity or gender) that lead them to choose to invest in more education in order to compete with other groups who do not face the same structural barriers. This has been explored in a New Zealand context by Gibson (2000), who reports that ‘the returns to education for Maori and Pacific Island workers are due almost entirely to the returns to credentials’ (p. 216) which is quite different from the case of European/Pakeha workers. Gibson concludes that his results ‘would seem to give some support for the hypothesis that statistical discrimination is practised in the New Zealand labour market’ (idem).

Chapter 5

Opportunities and Structures

The contextual nature of career decision-making is the focus of a great deal of social research; see, for example, Bynner (2004), Bynner and Parsons (2002), Fenton and Dermott (2006), Ferguson (2007), Furlong (2006), Furlong *et al.* (1996), Hammer (1996), MacDonald *et al.* (2005), Marks (2005), Maxwell (2001), Ngai and Ngai (2007), Pavis *et al.* (2001), Pilcher (1996) and Wade and Dixon (2006). In this chapter, we identify key themes in the literature concerning the ways in which young people's horizons for action can be shaped by their family, by the community contexts in which they live, and by meeting mentors or role models.

5.1 Family Influence

[My parents said] I should stay in school. And then they explained to me how hard they've had it since they left school, that they went straight into a job. But they said that school is the best years of your life... (Nathan, Australia, final year high school, Munns and Parente, 2003)

I wanted to go full-time to college to do computers, and I had a bit of a row with me dad 'cos he wasn't going to support me while I went there. He said, "either get a job or get out" so I disagreed with him. ... So I ended up leaving home and I said I'd do it the hard way... (Adam, UK, unemployed and homeless, Jones *et al.*, 2004)

Families have a powerful influence on career pathway choices: family relationships are often the primary relationships through which young people craft identities, and family members tend to be a key, trusted source of information, and of emotional and financial support in relation to career decisions. Young people's career aspirations are often closely linked to family aspirations. Studies on influences on young people's career decision-making, for example, show that family members consistently rank highly as trusted sources of information; a number of New Zealand studies put family influence at the top of the list, far ahead of school careers advisors (Boyd *et al.*, 2002; McLaren, 2003; Dupuis *et al.*, 2005).

Ermisch and Francesconi (2001) find that the educational attainments of parents are very strongly associated with those of their children: 'In particular, we find that young adults who experience single parenthood as children and those who come from families in the bottom income quartile have significantly lower educational attainments, while those whose parents are homeowners, particularly outright owners, have much higher attainments' (p. 152). Keane and Wolpin (2001) analyse data from the 1979 youth cohort of the National Longitudinal Surveys of Labor Market Experience (NLSY) in the United States. Their study finds that parental financial support can be substantial, and often contingent on college attendance by the young person. These transfers added about one year of educational attainment to the average person in the cohort, and contributed to intergenerational disparities in education (primarily by encouraging the children of rich parents to increase their education).

New Zealand research has also shown how family support can be contingent and differently enabling or constraining (Hipkins *et al.*, 2006; Vaughan *et al.*, 2006). Resources, both material and educational, are a major contributing factor to the nature of family support. New Zealand research by Vaughan (2008b), for example, reported that secondary students with mothers who had no qualifications and whose family had a low income were statistically more likely to not intend to go on to tertiary study. Lack of maternal qualification (but not low income) was also associated with not seeing a professional occupation as a likely choice, while students from high income families were more likely to say their parents had been a helpful support for their careers thinking than students from low income families. Bryce *et al.* (2007) found associations between secondary students' plans to go to university and high family income and high parental qualifications (see also Taylor and Nelms, 2008).

Family income appears to have a number of related effects. Furlong *et al.* (1996) Schoon and Parsons (2002) and many others have shown that poverty has a detrimental effect on academic achievement. Poverty at home is also likely to mean that parents struggle to offer financial support to their children to get them through post-school education or may wish them to move straight from school to work in order to start contributing to the family income as soon as possible. Young people themselves may consider this to be important too: they may be reluctant to incur debt through student loans, and they (together with family, community and peers) may perceive bringing an income into the family as a significant step in the movement from adolescence to adulthood (Bauder, 2001; Fernandez-Kelly, 1994; Villenas and Deyhle, 1999).

Financial support is clearly helpful in moving into further education and training, but other less material forms of support have also been shown to be useful for young people deciding on a career path. Canadian, US, UK and Australian studies have found that parents' emotional support is important in shaping the occupational aspirations of their children: young people's perceptions of support from parents and others is associated with their educational and occupational goals (Covell *et al.*, 1999; Kenny *et al.*, 2003; Schoon and Parsons, 2002; Munns and Parente, 2003; Arthur *et al.*, 2004). High levels of emotional support seem to have a beneficial effect by helping young people to stay engaged with their schooling and to have positive attitudes about both education and work.

Kenny *et al.* (2003) also looked at young people's perceptions of barriers to gaining a good career, and in particular whether they thought that poverty and/or racial discrimination might act as barriers. The study concluded that when young people recognised and experienced these, this had a detrimental effect on their schooling and their career aspirations (see also Gushue, 2005). Interestingly, the study's finding about the negative influence of the perception of barriers was less robust than an accompanying finding about the positive influence of adult support.

The importance of support from family, community and school comes through strongly in these and other studies: it is likely that a significant way of helping young people towards a good career pathway involves assisting them to identify and access whatever support may be available to them at home, at school and in the community. Nevertheless, offering support may be challenging for parents and relatives, particularly if they have had a negative experience of education or have not been involved in post-school education themselves. Parents in this situation may feel inadequate to the task of supporting the career decision-making processes of their children (e.g. Munns and Parente, 2003; Parente *et al.*, 2003; Career Services, 2007). Some may feel that their own experience indicates that post-school education may not be a good investment.

A study by Schnabel *et al.* (2002) comparing the United States and Germany concluded that the earlier in school a career path decision is made, the more 'conservative' it is likely to be. This is because many things such as a student's abilities and his or her potential in different areas are not yet known. Also parental influence is likely to be stronger when their children are young. In these situations, the career paths of a student's parents may come to be seen as a safe 'fall back' position, but if parents have a reasonably narrow understanding of the opportunities for post-school education and employment (based only on their own experience) this kind of decision-making may not work to a young person's advantage. This suggests that as young people get older, and advice and support become available from other sources, horizons may widen.

Parents may also be influential in ways they may not expect. Several studies suggest that young people are influenced in their ideas about work by the way their parents talk about their own jobs. Neblett and Cortina (2006) found that how children perceived their parents' work in terms of (i) the rewards it offered, (ii) the amount of self-direction parents had, and (iii) the levels of stress involved, all influenced their own outlook. Young people were more likely to be optimistic about their own opportunities in education and work if they saw their parents were positive about their work. The opposite was also true: when parents were negative about their work, their children picked this up and tended to be pessimistic about their own chances and likely future experiences. A key finding from this study was that even if parents felt negatively about their work, they could lessen the negative impact of this outlook on their children if they actively supported them in terms of career development in the future.

Some studies propose interventions into family career influence (following a deficit model), while others suggest enhancing the influence of family by including and supporting the family in relation to the young person's decision-making (Berríos-Allison, 2005; Perkins and Peterson, 2005; Bryce and Anderson, 2008). Several studies have measured aspects of the relationships between family support and career decision-making (Nota *et al.*, 2007) and between family encouragement and discouragement of certain occupational interests (Berríos-Allison, 2005) with a view to intervention and enhancement possibilities that could effect greater career self-efficacy for the individual student or young person.

5.2 Communities and Neighbourhoods

I like [living here]. It's good... All our family live dead close together... they're always there if you need 'em. (Carol-Anne)

Living here it's brilliant. We have no problems with anyone. We know all the thugs and thieves and whatever but everyone's okay... It's a lot better if you know someone and something goes wrong. If you have problems, you can always call on people. (Martin)

Every time I come back [here]... I know I'm home. I feel dead relaxed, as if it's a weight off your shoulders ... I don't like the place! ... You're secure. It's a security blanket; the place where you were raised. (Zack)

These comments come from young people in some of England's poorest neighbourhoods (MacDonald *et al.*, 2005). Clearly these neighbourhoods are important to these young people, even if, as the comments also suggest, they are places of difficulty and deprivation. A great deal of research suggests that young people from poor neighbourhoods do not achieve as well in

school and in their career development as their counterparts in better-off neighbourhoods (Bauder, 2001, cites many such studies). This is known as the ‘neighbourhood effect’. This phenomenon can be seen in the light of other research noted above, about young people and career aspirations. Common research findings are summed up well by Furlong and his research team (1996) using a survey of ten percent of all 16 year olds in Scotland:

- How well a student was achieving academically at school proved to be the most powerful influence on career aspirations: those doing well had higher aspirations than those not doing well.
- Parents’ jobs were important in shaping aspirations: young people with parents working as managers or professionals (e.g. lawyers, teachers, doctors, accountants and so forth) had higher aspirations than those whose parents were not in professional or managerial work.
- Those who lived in neighbourhoods characterised by unemployment, poverty and overcrowded housing, so-called ‘deprived neighbourhoods’, were likely to have low aspirations.

Thus, the evidence is strong that young people from poor neighbourhoods tend to have poorer chances of doing well in their careers than those from more well-off neighbourhoods. There are a number of reasons why this might be so.

- Poor neighbourhoods are generally composed of poor families, and so the factors discussed in the section above, about the influence of family poverty on young people’s aspirations, choices and opportunities, come into play.
- Goux and Maurin (2007) analyse French data, and find that an adolescent’s outcomes at the end of junior high-school are strongly influenced by the performance of other adolescents who are close neighbours. In particular, ‘the probability of repeating a grade at the end of junior high-school increases strongly when the other adolescents living in the same neighbourhood have already been held back a grade rather than when they have not’ (p. 1210).
- Findings from Kenny *et al.* (2003) discussed above may also be important. Young people’s perceptions of barriers such as poverty and discrimination in their neighbourhoods may lead many to conclude that their chances of finding good work are slim because of the power of these factors.
- Young people may want to look for work close to home because, as those quoted at the start of this section indicate, these neighbourhoods can be very close-knit communities. MacDonald *et al.* (2005, p. 883) found ‘strong, close, supportive relationships’ in poor neighbourhoods, and Forrest and Kearns (2001, p. 2141, cited in MacDonald *et al.*, 2005, p. 883) argue that ‘close family ties, mutual aid and voluntarism are often strong features of poor areas’ helping people to cope with poverty and unemployment.

MacDonald’s research team found that young people with strong links to neighbourhood networks tended to search for work within or close to their neighbourhood. A key problem for them was that the jobs available in these areas tended to be low paid, unskilled and insecure. So while they found work that was close to family, and in a community where they felt a sense of belonging, this work was not rewarding in terms of wages or prospects for the future.

Many job seekers use their networks to find employment but for these young people those networks went no further than their own poor neighbourhoods, and so the job opportunities open to them also went no further than this (MacDonald *et al*, 2005; Pavis *et al*, 2001). MacDonald calls this ‘the paradox of networks’: while networks are a key way for many to find work, they can also lead to a dead-end if they don’t link into labour markets with plenty of opportunities.

Similar dynamics are at work in many rural communities (Eacott and Sonn, 2006; Lapan *et al*, 2003; Pavis *et al*, 2001; Shucksmith, 2004) including many indigenous communities whose young people may have strong aspirations to work to benefit their community. Arthur *et al*. (2004), for example, studied the careers and aspirations of young Torres Strait Islanders. They found that these young people relied on local networks of family and friends to find work, trusting these much more than institutions or people who would provide them with information or placements. Supporting their families was a priority for these young people, and this, together with a shortage of jobs (other than fishing) in their communities, constrained their options and made it difficult for many of them to pursue their aspirations. Hunter and Gray (2004) similarly report that indigenous Australians rely heavily on friends and family as sources of job information, but that these networks are likely to be limited in their scope and opportunities. Long (1999) and Shafer and Rangasamy (1995) discuss similar dilemmas facing young Native Americans who have a strong commitment to family and community but for whom job opportunities close to home are often scarce or of poor quality.

It may be helpful to frame these results in terms of risk. It is risky for a young person to move away from home, particularly from a tight-knit community where he or she feels a strong sense of belonging and security. This is especially so for those who have a powerful identification with their community or who don’t have many resources in the form of money or qualifications. They may feel that without these resources their chances of finding a good job elsewhere are low, and that this chance is not worth taking if it means losing the close links to family and community that they can maintain if they stay in the neighbourhood. The risk involved in ‘staying put’ on the other hand, is that finding a good job in a poor neighbourhood can be very difficult.

This risk can be addressed from two directions: one solution involves increasing the opportunities available in a particular neighbourhood or community; a second involves increasing the level of security for those leaving to find education or work elsewhere. The first option includes economic development leading to improved job opportunities, but might also include the introduction into the neighbourhood or community of quality educational institutions. Do (2004) found that the presence of quality universities or colleges in a community led to improved participation in further education by those on a low income, even if they didn’t attend the local college. One obvious reason for this is cost, since there are many savings to be made from living at home while going into tertiary education. But the study found that cost did not entirely explain the change in participation. Do (2004, p. 249) suggests that when a community environment includes a college, young people ‘may foresee a post-secondary education as a natural goal and take that path as a means of success in the labor market’. In other words, this research suggests that the establishment of a tertiary education institution in a community changes the identity of the community, so that young people from that community feel that they can take up post-school education without risking the security and sense of identity they gain from belonging to that community: it becomes part of the ‘natural order of things’, part of one’s community identity.

In contrast to the more macro approach of the first option, the second option falls more within the scope of agencies working directly with young people. Since networks play a key role in providing security and helping people explore career development opportunities, it is useful to consider ways of enabling young people to link into networks that offer better opportunities than those available in the neighbourhood but which also give a strong sense of belonging and security. A United States study by Bauder (2001) gives some support to this suggestion. Bauder compared the experiences of young people in two similar poor neighbourhoods in Texas called Lanier and Palm Heights. Young people living in Palm Heights were much more likely to be in school or in work than those living in Lanier. Bauder explores this in terms of a key difference in how programmes for young people were run in these neighbourhoods.

- In Lanier, programme workers separated out those young people they regarded as being ‘at risk’ and/or ‘dysfunctional’. Most programmes and services were then directed at this group in an attempt to change their behaviour in ways more in keeping with the norms and values of the programme workers. Those young people who did not make this change were directed towards low-level work in the neighbourhood on the assumption that they could not achieve better work.
- In Palm Heights this division did not happen. Programmes and services were organised inclusively, according to age groups rather than the level of a young person’s perceived dysfunction (as judged by programme administrators). And, crucially, unlike the Lanier case, the Palm Heights programmes incorporated youth participants and adult volunteers from a range of neighbourhoods, enabling young people in Palm Heights to develop friendship and mentoring relationships with people from diverse backgrounds.

In Lanier, the aim of the programmes was the behaviour modification of young people regarded by administrators as ‘difficult’. In Palm Heights, these labels were not used to isolate a particular group and the processes involved in the programmes enabled participants to create networks with adults and other young people from beyond their own neighbourhood. As Bauder (p. 605) points out, the Palm Heights programmes ‘focus on spatial and social inclusion of all members of their youth groups. Through integration strategies they attempt to disrupt patterns of social isolation and provide “bridges to other social networks” (Fernandez-Kelly 1994:109)’. It is possible that, by following this inclusive path and creating these bridges, these programmes have found a way of addressing young people’s need for security and a sense of belonging within networks, while also enabling them to look beyond the limited opportunities in their own neighbourhood.

5.3 Mentors and Role Models

More than job characteristics are taken into account when an individual forms an image of a career: the perceived lifestyles of workers in the industry or occupation (including their personal life, their income and their relationships) are also important (Taylor, 2005). This lifestyle view of careers is reported by many young people throughout the literature and may be a reason why role models are found to have a powerful influence: they are seen to convey a great deal about what it may be like to have a particular job, what sort of person does this job and what kind of life they lead (Foskett and Hemsley-Brown, 1999; Gianakos, 1999).

One way of creating a bridge between education and employment, therefore, is through the use of mentors who enable young people to engage with learning in an education/training programme, or on the job, through a significant relationship with a person whose position and expertise they respect and trust. This is a topic of particular interest in the indigenous studies

literature. Arthur *et al.* (2004), for example, cite comments by young Torres Strait Islanders who identified having a mentor as a key to achieving goals (second only to family support). Brigham and Taylor (2006) report on an apprenticeship training initiative for aboriginal youth in Canada, which included aspects that were lauded by participants and their communities because its mentoring approach was seen to parallel traditional practices in which elders taught the young through apprenticeship-style learning. Dawes and Dawes (2005) describe the success of a mentoring programme designed for indigenous young men in a detention facility in Australia, commenting on the value of mentors as role models from the community (see also Long, 1999, Helm, 2005, and Spencer, 2006).

A class of models within economics provides an explanation of how mentors and role models can expand the career possibilities considered by young people from social minorities who have not previously entered specialist occupations (Manski, 1993a; Chung, 2000; Oxoby, 2008). The essence of these models is that ‘individuals who fail to observe successful predecessors of their same type [e.g. same race or gender] may underestimate their potential for success in the occupation’ (Oxoby, 2008, p. 400). This underestimate leads these individuals to choose lower levels of education than are justified by their actual abilities. The system is therefore self-reinforcing, perpetuating the disadvantage into the next generation. These models all suggest a role for affirmative action policies to improve individual and social outcomes.

Chapter 6

Systems Linking Education and Employment Choices

Formal systems linking education and employment choices operate very differently across different countries (Ryan, 2001). This chapter is comprised of three sections. Section 6.1 provides an overview of the different types of systems, from highly formalised in Northern Europe and Japan to the more decentralised systems in North America, the United Kingdom and Australasia. Section 6.2 discusses recent frameworks that have sought to strengthen linkages between schools and employers, particularly in promoting vocational skill development in the more decentralised systems. Section 6.3 discusses New Zealand's National Certificate for Educational Attainment in that context.

6.1 International Systems

In a number of northern European countries (notably Germany, Austria, Switzerland, Denmark and Luxembourg) there are highly formalised systems based on apprenticeships. Japan also has a highly formalised system involving close relationships between individual school and individual firms (Brinton, 2000; Hara, 2005). Elsewhere (in the United Kingdom, the United States, Australia and New Zealand, for example) the linkages between education and employment are less structured and require young people to create their own individual pathways.

A key difference is that the more formalised systems splits students between vocational and academic tracks at a relatively early age.¹⁰ In Germany, for example, students enter diverse education tracks as early as twelve; those on an academic track are expected to go from school to university and to train for professional careers, whereas those on the vocational track are expected to enter apprenticeships. The apprenticeship system covers more than 300 occupations, from the traditional trades to jobs in the service sector and administration (Lehmann, 2005). Traditionally in this system, a dual system operates for those on the vocational track: during the last three years of school, these students might spend three days each week in a workplace as an apprentice being trained in a particular vocation (for example, as a chef, a car mechanic and so forth) and two days per week in school receiving a more academic education in subjects relevant to their apprenticeship.

In the United States, on the other hand, (similar systems exist in Canada, the United Kingdom, Australia and New Zealand) the system is much more fluid and students can leave decisions about career pathways open until they leave school. Links with employers tend not to be so closely woven into the school system, and work experience for students is likely to be short term (often no more than a few weeks). This section discusses three key aspects of these systems, flexibility, transparency and academic/vocational integration.

¹⁰ There is a considerable literature on the merits or otherwise of tracking or streaming. See Rosenbaum (1996) for a discussion on four dimensions of tracking: inclusiveness, electiveness, selectiveness and scope.

Flexibility

In Germany a decision on which educational track to take must be made fairly early, and once a student has embarked on a particular education path it becomes difficult to change track. The literature records advantages and disadvantages associated with this low level of flexibility. As noted above, Schnabel *et al.* (2002) found that the earlier a career path decision is made the more likely it will mirror the working lives of parents, and this can contribute to the reproduction of inequality. On the other hand, because a decision is made early a student has the opportunity to be well-trained in the occupational skills relevant to a particular occupation and is likely (although not guaranteed) to gain employment in this occupation on leaving school because of the close links already established with employers. Because of the intensity of the training, students are also likely to enter jobs with reasonably high-level skills.¹¹ In the more open system in the United States, decisions can be left until much later, allowing students to pursue a more general or varied educational path that may lead to a wide range of different jobs. While this flexibility may offer considerable freedom of choice, it can also mean that individuals may flounder when they leave school because they lack specific occupational skills and they have not established close links with employers.

Deciding on the level of flexibility in a system means considering this trade-off: making an early decision about which education and career path to take can reproduce inequality and reduce choice, but it does enable a high level of focus and training over an extended period. Leaving a decision until much later, and enabling a high level of flexibility in changing course, can mean that a school leaver will flounder in the labour market, lacking useful high level occupational skills. But it also can mean that the young person has considerable freedom of choice about pursuing a career path and may have a chance to challenge parental expectations about that path.

Transparency

Lehmann (2005) has described how young Germans in apprenticeship training while still in school can ‘see through the system to plot a course from where they are in the present to a distant future goal’ (Hamilton and Hurrelmann, 1994, cited in Lehmann, 2005; see also Hamilton, 1994, cited in Heckhausen and Tomasik, 2002). To a certain extent this is function of the formality of the system. Once a student is on a track (vocational or academic) it is made fairly clear how that path will lead towards university or towards a particular apprenticeship and thence to a job.

More open, less formalised systems tend to be less transparent. Many critiques of systems of vocational education are found in the research literature, often focusing on their lack of transparency. In particular, problems arise when students are undertaking school work and vocational training (or work experience) at the same time but the links between these are neither close nor clear. The students don’t understand (i) how their vocational training links to their school work, (ii) the relevance of their school work to their training, and (iii) how to combine these to create a career pathway. At the same time, employers may be unclear about (and may even discount) the utility of the school work that the students are doing (Rosenbaum, 1996; Rosenbaum and Binder, 1997; and Krahn *et al.*, 2002). Transparency is therefore linked to the credibility of the qualifications system.

¹¹ Hanhart and Bossio (1998) and Heckhausen and Tomasik (2002) comment respectively on recent problems with the Swiss and the German apprenticeship systems struggling to guarantee work.

In fact, a key aspect of transparency in the system rests on the way in which academic and vocational learning are related to each other: if students and employers are able to see how these fit together, then both forms of learning will become meaningful in the crafting of a career pathway. This requires (i) that they be integrated, and (ii) that students, teachers, employers and worker organisations (such as unions) all have a good understanding of, and respect for, how this integration operates and the qualifications it produces.

Integrating Academic and Vocational Learning

Integrating academic and vocational learning is an on-going issue; see, for example, Arum and Shavit (1995), Beekhoven and Dekkers (2005), Krahn *et al.* (2002), Lehmann (2000, 2005), Meijers and Wesselingh (1999), Rosenbaum (1996) and Shilling (1991). A great deal of research points towards the desirability of such integration but also indicates why there are difficulties achieving this – notably because these are often perceived as having different objectives and are typically set in opposition to each other in formal educational contexts. Academic knowledge and work is aligned with theoretical, abstract, discipline-based thinking. Vocational or technical knowledge and work is aligned with practical, experiential and observable phenomena. These different positions – or the reasons for their opposition - can be traced back to Greek philosophers’ ideas about disciplines and knowledge, and then to a blending of these with egalitarianism (the idea that everyone is entitled to education and a chance to improve their lives), and to industrial society’s need to sort and prepare people for different types, and tiers, of paid work.

The oppositional thinking of the two kinds of knowledge – academic versus vocational – have tended to align with major schools of thought in education such as traditional, mainstream and ‘liberal’ education versus progressive and alternative education. Educational debates have often expressed this in terms of ‘education versus training’, ‘mental versus manual’, ‘knowing that’ and ‘knowing how’, and ‘subject-centred versus child-centred’.¹² Pedagogic differences include use of larger, formal classes with cohort and room changes centred on learning content versus smaller, informal classes with ‘home’ rooms centred on pastoral care and learning ‘life-skills’.¹³

Egan (2001) identifies three ideas forming the education bedrock that lies behind the academic/vocational divide: shaping the mind via a disciplined academic curriculum (exemplified by Plato’s thinking); facilitating the development of students’ potential (exemplified by Rousseau’s work); and socialising the young for society (including work). Egan argues that these ideas are fundamentally flawed in themselves as well as incompatible and undermining of each other, and suggests that, at best, the manifestation of each idea (and the related institutions) limits the damage of the others. He describes the compromise this way (Egan, 2001, p. 936):

So, we socialise but we undercut indoctrination by the academic program calling society’s values into question by the commitment to individual development reducing society’s claims on any particular individual; we pursue an academic program, but we undercut intellectual development

¹² For a current example of how this plays out in the context of New Zealand’s National Certificate of Educational Attainment, see section 6.3 below and the section on the technology curriculum in the second Learning Curves report of Hipkins *et al.* (2004).

¹³ For a detailed discussion on how academic and vocational forms of education manifest as alternative and mainstream forms of education, see Vaughan (2004, particularly chapter 3) on how an emerging ‘pathways framework’ can be importantly distinguished from earlier education frameworks by its ‘responsibilising’ applicability to *all* school students, not just early school leavers, at-risk students, or special education students.

by egalitarian pressures from socialisation and attention to other forms of individual development; we encourage individual development but we undercut its fulfilment by the homogenising pressures of socialisation and by the standardising brought about by a common academic curriculum.

There are increasing calls to integrate vocational and academic subjects in school as part of the emphasis on an emerging ‘new work order’, ‘new vocationalism’ and a ‘knowledge society’, potentially bringing together the needs of employers and schooling in new ways and giving new impetus to lifelong learner identities (Vaughan, 2008a). As Ryan (2002) has pointed out in the Australian context, work is also, like school, a rich source of learning and the experience of learning from work could be an entitlement for *all* students, especially if assessed and recognised by high value qualifications serving multiple purposes and users. However these are issues about how new policies (in Australia) on vocational learning in school confront older constructions about who vocational students are and what vocational knowledge is (Yates, 2006).¹⁴ Depending on people’s different positions within industry and education, the issues actually look different (Yates, 2006, p. 283).

For some, the issue is about developing greater vocational attributes, orientations and identity across all students. For others, the issue is about how accredited vocational subjects should be taught, and the problems in adequately teaching these, especially in relation to work placement. For yet others, the issue of VET is about marginalised or at-risk students, and special projects that can be put in place in partnership with industry to save these.

This debate has implications for how schools treat education and employment linkages, discussed in the following section.

6.2 School-Employer Linkages

They treated me like an adult. It was good, not like at school. I could do what I wanted to and they (supervisors) spent a lot of time helping me. (Student in UK computer placement work experience; Shilling, 1991)

I was looked after all right, but I wasn’t allowed to do much and I spent my time watching or making tea, or sweeping the floor. (Student on hairdressing placement work experience; Shilling, 1991)

Students themselves are often unclear about the links between academic and vocational learning, particularly in contexts where structural integration does not take place. Lehmann (2005), for example, criticises an apprenticeship programme in Canada on the grounds that it fails to make the connections between the different forms of learning and that, as a result, some young people saw their vocational training and/or work experience as ‘an escape’ from school. Shilling (1991) criticises a work experience programme in the United Kingdom on similar grounds. The following exchange between Lehmann and a student in a Canadian apprenticeship programme involving both vocational training and school work is illustrative (Lehmann, 2005, p. 120).

Lehmann: What kind of things that you learned at school have been really useful for you at work?

¹⁴ See also Bathmaker (2005) on the United Kingdom research into this area.

Debbie: [pause – laughs nervously] ... Well, I don't really know. Because no-one ever really talks to me about the work I do, here at school.

L. You don't talk to any of your teachers or counsellors about what happens at work and the things you do at work?

D. No, just Mr [work experience co-ordinator], actually. That's the only person I talk to about it.

L. And what kind of things would you talk about?

D. Like, sometimes, I'll be walking down the hall and he'll see me and say 'How is work?' Just that kind of stuff.

L. ... at work, have you learned anything, any values, any skills, that you think will be useful for you at school?

D. [pause – laughs nervously] ... Going to work and going to school are two different things. They are two different things. I can't really say.

It's not clear to Debbie how what she has learned at school might help her apprenticeship. In addition, her experiences in work are not reflected on at school in a way that will enhance her learning there. Without some kind of integration between the two, Debbie could be forgiven for thinking that her school work is more or less irrelevant to her apprenticeship and for wondering why she should continue on in school. The research literature argues that these two ways of learning should 'speak' to each other, together enhancing Debbie's understanding of the career path she is trying out.

As noted above, this kind of integration can be enormously difficult to achieve. It requires resources: schools must have the time and teacher numbers for communicating between school and work sites and for enabling students to bring together their practical and academic knowledge. And employers must be prepared to take training seriously and to commit resources (of supervisory time, in particular) to this. If young people are learning the theoretical basis of a particular occupational field in school, but are consistently marginalised in their work experience placements by being consigned to sweeping the floor and making the tea, they will struggle to make sense of the academic work they are undertaking in school and to apply it in any useful way in the workplace.

It also requires the convergence to a certain extent at least of interests and objectives between educational and workplace institutions (see for example, Ahier *et al.*, 2000). One aspect of this which has been explored in the literature is the generation of a 'training culture' in which vocational training and trainers are highly respected rather than stigmatised as is often the case where the academic vocational divide is significant. Roberts *et al.* (1994) have observed interesting differences between training cultures in the United Kingdom and Germany. In contrast to the situation in the United Kingdom, 'training in Germany was not regarded as an unfortunate but necessary expense'. Rather 'employers believed that they had a responsibility to train and would have incurred social disapproval had they failed to do so' and 'the *meister* who carried training, technical and management responsibilities had become a high status role' (p. 42). At the same time, young Germans believed in the importance of being properly trained before being hired as workers, and they believed that this training was their right – a belief with which employers agreed.

This training culture is also expressed in German vocational schools where apprentices undertake courses in social studies in which they learn about employment laws and regulations, and about their rights as employees in the workplace (Lehmann, 2005). Lehmann points out, 'without this understanding ... youth apprentices are open to forms of exploitation against

which they have no recourse or which they may not even recognize' (p. 124). Brigham and Taylor (2006) likewise criticise apprenticeship programmes for aboriginal youth in Canada arguing that these are focused on the needs of employers rather than students and do not include the teaching of knowledge that would allow the students to become critically engaged citizens and workers.

The research indicates that the development of a work culture in which formal training is given a high priority would be characterised by the following:

- Schools and employers would see the benefits of putting time and qualified staff into establishing and maintaining relationships and into high quality education/training.
- Schools, employers, and worker organizations (such as trade unions) would have a good understanding of, and perhaps input into, those aspects of the senior curriculum where links to employment are likely to be relevant and productive.
- Schools would provide, and employers would take seriously, good information about students' abilities and suitability for particular work opportunities. Rosenbaum (1996) has argued that employers in the US seldom used grades or test scores in their hiring decisions, preferring to rely on brief impressions given at an interview (see also Ryan, 2001, p. 59). He argues that this sends the wrong message to students, who see that academic effort in school may well not be rewarded in a hiring situation. Krahn *et al.* (2002) make a similar observation of the situation in Alberta, Canada: most students in their study did not see any labour market significance for the analytic skills they gained in high school, and employers and students were unable to communicate effectively with each other about skills. Rosenbaum contrasts this situation with the systems in Germany and Japan where students are clearly informed about what employment skills are required for particular work opportunities, and employers receive good information about students' skills and work habits.
- Students would know that their school work is relevant to, and will be acknowledged by, a potential employer (e.g. through a job offer, a good starting position, the promise of future advancement and so forth). This gives students good reasons to engage with their school work and a good understanding of how this engagement will benefit them in the future.

Scotland is attempting to put these principles into practice in a policy programme entitled *Determined to Succeed* that provides school students with carefully structured exposures to the world of work (Scottish Executive, 2002 and 2003). The programme is based on local partnerships between schools and employers, led by local authorities and overseen by a national committee (the Smith Group) of senior figures from business and educators. A report evaluating the first three years of the policies highlighted the critical role of employer involvement (Scottish Executive, 2007 pp. 12-13):

The continued involvement of Scotland's employers is therefore critical and is at the heart of our strategy. Young people need to understand the relevance of what they are learning to the world in which they live. Enterprise in education needs to enable young people to understand the business world and what it means to be enterprising. They need to understand entrepreneurialism and the opportunities it creates for wealth creation, not just for the individual but for Scotland. Young people need to be able to make informed decisions about their future education and employment.

This is why it is so important that employers, from all sectors, play their part. And they do! Many employers have been involved for some considerable time. But many more have become involved since the launch of *Determined to Succeed*, a powerful illustration of the desire and commitment

evidence of learning in a part of a course (typically six or seven standards per traditional year-long subject). Specifically designed for the NCEA, they are awarded at ‘achieve’, ‘merit’ or ‘excellence’ levels, although the number of credits awarded remains the same regardless of the level achieved.

Individual unit standards can be grouped together in various ways to document a qualification. Some schools were quick to recognise the advantages of assessing certain subjects with unit standards, especially for students who need alternatives to ‘traditional academic learning’. The development of ‘alternative’ pathways through the secondary school has thus been strongly supported by the opening up of this more flexible way of credentialing learning.

Uptake of unit standards for the assessment of conventional school subjects was, however, less enthusiastic. In part this was a response to what was seen as the excessive fragmentation of disciplinary subjects into discrete ‘units’ of learning (Marshall, 1995). This has also been an issue where a single national qualifications system has been proposed in the United Kingdom, drawing criticisms about the irreducibility to precisely specified outcomes of personal intellectual development in the form of general (rather than vocational) education (Young, 2003).

Teacher workload was also an issue in New Zealand because unit standards are internally assessed, requiring teachers to make all the relevant professional judgements of their students’ achievement (repeatedly for re-assessments), carry out moderation, and keep records. So this was another reason for the development of achievement standards developed from curriculum statements from the core and traditional subjects.

Because unit standards tend to cover a wider range of types of learning (although many do assess aspects of the conventional school curriculum), including assessment for vocational certificates such as the New Zealand Certificate of Employment Skills, unit standards have become associated with the more ‘alternative’ and non-academic subjects. Many people therefore regard unit them as inferior to achievement standards – a ‘soft’ option that gives students ‘easy’ NCEA credits (see for example Meyer *et al*, 2006). This perception about ‘soft’ options, unit standards, and alternative or vocationally-oriented subjects persists, particularly in media and popular debate about the NCEA, despite research that suggests very few students chose subjects because they might yield ‘easy NCEA credits’ but rather see their subjects as interesting and useful immediately or useful in the future (Hipkins, Vaughan, Beals and Ferral, 2004; Hipkins and Vaughan *et al*, 2005).

In the *Learning Curves* research, for example, different within-subject options were analysed in the largely compulsory subjects of English, mathematics, and science offered in six case study schools. This research wanted to avoid traditional assumptions about which students had greater ‘ability’ to learn, and binary differentiation by which non-traditional courses also become ‘not-academic’. Hence the researchers devised course names from sociologist Basil Bernstein’s (1971) theoretical and empirical study of the structure of educational knowledge: *traditional-discipline* options are mainly assessed by achievement standards, and reflect traditional ways of thinking about the structure and content for that ‘subject’; *locally redesigned* options are designed to meet specific student learning needs and interests and assessed with a mix of achievement and unit standards, sometimes drawn from different year levels, and occasionally also from different subject areas (allowing for different pacing of teaching and learning with potential to contextualise learning in new ways); and *contextually-focused* options have origins typically in redesigned ‘applied’ or ‘vocational’ courses, linking school learning to everyday or future work contexts, and mainly assessed internally by unit standards, and often

offering a reduced number of credits, creating more flexibility for different learning experiences and varied pacing of learning (Hipkins, Vaughan, Beals and Ferral 2004).

A key point about the NCEA for the purposes of this literature review is that, as part of a National Qualifications Framework (NQF) predicated on credentialling a wider range of learning than traditional academic learning, it affords a range of possibilities for students to engage in decision making about their learning and qualifications – which directly affects their transition from school. The idea that students make some decisions like this is not new, but the possibilities for such decisions used to be far more restricted because school qualifications were more closely prescribed and externally controlled. The NCEA, on the other hand, can be thought of as ‘produced’ – partly by students who may decide which standards to attempt and how to combine credits towards qualifications and post-school pathways, partly by teachers who may encourage or discourage student choices, and partly by schools who organise pathways through and beyond school by the number and type of credits they offer and by the timetabling of courses (Hipkins and Vaughan *et al*, 2005).

The *Learning Curves* analysis suggested that even ‘core’ subjects such as English and mathematics, seemingly taken in common by most students at least until the end of year 11, look very different for students in these different clusters, and are assessed by quite different combinations of achievement and unit standards (Hipkins and Vaughan *et al*, 2005). This is important because entrance to university is enabled or constrained by having the correct combination of four factors: total number of level 3 credits; a literacy requirement; a numeracy requirement; and having credits, mostly from achievement standards, distributed in certain ways across ‘approved subjects’ from a published list generated in consultation with university Vice Chancellors (Vaughan, 2008b). Recent research from the Star Path project at Auckland University has shown that, of those four factors, not having the correct distribution of credits across subjects is likely to be the main ‘choke point’ for Māori and Pacific students in low decile schools. Even if they satisfy the other three requirements, not having ‘chosen’ a subject combination that will yield the necessary pattern of credits is likely to be what will prevent them from taking up university study immediately after they leave school (McKinley, 2008).

An important issue is therefore how students understand the various pathways opening up. These difficulties were highlighted in research, cited in Lee and Lee (2000), into changes in teaching, learning, and assessment with the Scottish National Certificate, which had modularised programmes of study and criterion-based assessment. The changes indirectly raised issues about the role of schooling in relation to how senior students understood their choices and pathways. The research found that teachers worried that modular programmes and continuous assessment would mean students would lack an overview of their study programme, although more than half the teachers, nearly all the employers, and half the students considered the new system had helped learning. The research also found that teachers considered the new system placed an inappropriate amount of responsibility on students for their own learning (wide subject choices) but also fostered a passive attitude toward learning (the passing of modules) rather than encouraging a deeper understanding of what was to be learned.

Through their survey responses and in particular their focus group discussions, students in the *Learning Curves* project (Hipkins and Vaughan, 2002a; Hipkins, Vaughan, Beals and Ferral, 2004; Hipkins and Vaughan *et al*, 2005) indicated that they have a vision of pathways through and beyond school and a sense of their own individual fit with those. Some students even argued for a more explicit pathways focus, including support for further ‘streaming’ of courses or groups within classes, professing a highly individualised ‘horses for courses’ understanding of how the NCEA could or should work for people. Students’ responses in focus groups have

exposed the NCEA's weakness here. For many, their professed strategies were not *learning* ones but *assessment* ones (Hipkins and Vaughan *et al*, 2005, p. 129):

For these students, their internalising of the NQF/NCEA system has produced similar kinds of cynical forms of compliance, technical understandings of education, and low-risk strategies to those we have already seen under the previous assessment system. What is new and specific to the NCEA here is that these attitudes and dispositions are more transparent than under the previous system—largely because the NCEA as a qualification is also more transparent and requires students to take a more active role in producing it.

Perhaps what students' attitudes also usefully reveal here is that summative assessment at every year level is not always conducive to (lifelong) learning. And that while students have quite narrow views of learning, these may be related to teachers not articulating insightful reasons for taking particular subjects (Hipkins and Vaughan, 2002b). There have certainly been suggestions that schools are over-assessing students since the NCEA was first implemented in 2002, with the Post-Primary Teachers Association pointing out that the NCEA Level 1 is rarely used as a school leaver's qualification, as School Certificate previously had been, and more students now stay on for Year 12 and gain the NCEA Level 2 (Vaughan and Hipkins, 2007).

What this really amounts to then is that all participants (students, parents, teachers, employers – but particularly students) need a good understanding of how qualifications relate to in-school and post-school education, training, and employment. In this context, it is interesting to note that in Wales, every senior secondary student is now allocated a 'learning coach' to support the type of decision making that secondary students now face (National Assembly for Wales, 2004). A learning coach could become part of the structure and practices of the school, which the *Learning Curves* research has shown is as important as the individual decision-making of, and support for, students.

Finally, although the NCEA was originally envisioned in terms of challenging the academic/vocational divide (see Peddie, 1998) and it still has this potential, research has shown that, so far, this divide has become more entrenched in some schools (Hipkins and Vaughan *et al*, 2005). This divide was never as marked as in other countries because the allocation of students to 'technical' or 'academic' secondary schools was not adopted in New Zealand (in comparison with, say, Germany). However the egalitarian ideal of a common core curriculum for all secondary schools became, in reality, a common academic curriculum, taught in traditional academic ways (Lee and Lee, 2000). This also cuts the other way; research on the New Zealand Technology curriculum in the NCEA context shows the challenges in shifting what has traditionally been a teacher-driven, prescriptive transition-to-work focus through technical subjects to a teacher-facilitated, enquiry-focused, problem-solving focus that has some schools seeing an 'intellectualisation' that does not meet their particular students' needs; in these cases some schools opt to work with industry training organisations and repackage their technology courses, offering different National Certificates, not NCEA (Hipkins, Vaughan, Beals and Ferral, 2004).

Chapter 7

Conclusion

This report has drawn on the international literatures in education, sociology, indigenous studies and economics to begin a trans-disciplinary account of key issues for young people making education and employment choices in their transition years from school to work. Previous chapters have focused on five themes: choice in education-employment linkages; crafting identities; discovery and development of abilities; opportunities and structure; and systems linking education and employment choices. In this concluding chapter, the authors bring together recent developments in their four disciplines to lay firm foundations for the remainder of the Education Employment Linkages research programme.

The education literature continues to emphasise three key and conflicting roles for education (Egan, 2001): shaping the mind via a disciplined academic curriculum; facilitating the development of students' potential; and socialising the young for society, including work. Within this framework, there have been some important developments in conceptualising how schools can help students make good linkages between their education choices and future employment opportunities.

The first involves renewed efforts to integrate academic and vocational learning within schools. Young people are hard wired to learn, so that educational approaches should foster young people's ability to be good choosers, skilful problem-solvers and lifelong learners, whatever their subjects of study (Claxton, 2006). This means more than supporting students' current learning, but must include expanding their learning *capacity* in the present and for the future. This has very strong implications for careers guidance in schools. Instead of restricting this activity to 'career advice' focussed on providing vocationally-oriented material to students at risk of leaving school early, careers educators can play a crucial role in developing 'career management' skills for all students to use over their lifetimes (International Symposium on Career Development and Public Policy, 2006).

The second important development is to reconsider linkages between schools and employers. In some countries, these linkages have been highly structured, including the apprenticeship systems of Northern Europe and the very strong local linkages in Japan. In countries with more decentralised systems, there has been widespread recognition that schools can do more to help prepare their students for the world of work. Initiatives in line with this thinking have included recent initiatives to: provide secondary school students with work experience; increase the training/education culture within workplaces (including stronger involvement with local schools); and to redesign school qualifications so they provide useful information for students and employers about an individual's abilities and skills.

The sociology literature continues to emphasise the powerful impacts that individual identity (Wyn and White, 1997) and structural constraints such as class, gender and ethnicity (Bynner *et al*, 1997) can have on young people's decision-making in their transition years. Recent developments in sociology have begun to pay more attention to agency and rationality, while continuing to recognise that an individual may be constrained by 'bounded horizons' created by structural factors (Hodkinson *et al*, 1996; Foskett and Helsley-Brown, 1999). The resulting

model of 'pragmatic rationality' identifies three interlocking dimensions: decision-making is a process, not a one-off event, and is part of the life course; decision-making about a post-school path is part of a wider lifestyle choice, and is strongly shaped by context and culture; and decision-making is a social process, taking place in interaction with others, so that the actions of others will shape this process. This process is conceptualised as being constituted by a number of distinct turning points or moments of choice, interspersed with periods of routine.

Another recent development within sociology has been to deepen understandings about the nature of identity construction and maintenance. This literature conceptualises identity as more fluid than previous writings, emphasising that a young person's identity is typically multiple, contested and dynamic (Wyn and White, 1997; Ball *et al*, 2000; Bottrell, 2007). Within this approach, disengagement from learning can be analysed in terms of a clash between a student's identity and his or her school's expectation of an ideal student's identity. The approach also has implications for careers educators in schools, suggesting that effective education for employment is based on enabling young people to undertake the identity work necessary to understand themselves in changing contexts.

The indigenous studies literature continues to recognise that indigenous young people often experience difficulties within national school systems. The early literature tended to be written by outside scholars *about* indigenous communities, and tended to use 'gap-language' to describe the problem without being able to suggest practical steps to address the problem. The worst of this literature could be interpreted as suggesting that 'being indigenous' was the problem. More recent contributions, including a small number by indigenous scholars recording the voices of their own communities, have begun to analyse structural issues and to propose alternative practices that would improve learning outcomes (Parente *et al*, 2003; Arthur *et al*, 2004; Helme, 2005; Hughes and Thomas, 2005; Bishop and Berryman, 2006; Mahuika, 2007). A specific example relevant for careers educators is that several studies have commented on the value of mentors drawn from the community as role models for young indigenous students.

Some important themes have emerged from this literature. For many indigenous young people, decision-making may involve recognition of the interdependence of the self and the collective, including subordination of individual goals to group goals, and the importance of the values of duty and obligation over the primacy of the individual. Effective learning can only be built on good relationships in which teachers care for their students as culturally located human beings in ways that do not communicate low teacher expectations and negative stereotypes. In the absence of good relationships, a student's identity as a member of the local indigenous community may be ignored or rejected by teachers and classmates, and the student may have imposed and cultivate an identity as a disengaged learner. Indeed, a decision to leave school early may be a purposeful response by an indigenous young person resisting mono-cultural and ethnocentric schooling systems.

The economics literature continues to focus on rational choices made by young people to maximise their opportunities within the constraints of their abilities and other endowments. The Shultz-Becker individual choice model of human capital investment remains very influential. Another important model is the 'signalling' model that demonstrates how employers can use qualifications to select employees with a high level of abilities, since higher ability people will choose more education in the Shultz-Becker model.

Recent contributions to this economics literature have recognised that human capital decisions are sequential choices repeated year after year. Some of these models also recognise that students do not necessarily know their abilities when they make education choices, and so have

to revisit their plans when they discover more about their abilities through education. This approach recognises that ‘failure’ in education need not always be a bad outcome. In an entrepreneurial culture, people should be encouraged to try new things and to explore their potential interests and abilities. If they learn in the process that they do not have an ability to do well in a particular course of study, this is important new information in their personal development. But if this is the case, they should not be advised to persist in their original plans; instead, the new self-knowledge about their abilities should be reflected in a new career plan.

This literature suggests that completing a programme of study is an important step towards achieving better employment outcomes, but warns it is only a step. People can end up in occupations where their qualifications are higher than necessary for the occupation, or where the qualifications lie in different fields, known as education-employment mismatch. This may be due to insufficient demand for people with particular skills, or may be the result of a person completing a qualification in a field where they have no particular ability or interest, or may be caused by structural barriers in the labour market such as discrimination based on class, ethnicity or gender.

A recent class of models within economics addresses the question noted above of how mentors and role models can expand the career possibilities considered by young people from social minorities who have not previously entered specialist occupations. In the absence of role models, young people underestimate their own ability to enter specialist occupations. They therefore choose lower levels of education than are justified by their abilities, which produces a self-reinforcing system, perpetuating the disadvantage into the next generation. These models all suggest a role for affirmative action policies to improve outcomes, both for individuals and for the efficiency of the national economy.

The recent developments described above in the education, sociology, indigenous studies and economics literatures tend to reinforce each other. At their collective centre is the young person, conceptualised as a dynamic individual who is continuously constructing self-identities in diverse contexts, discovering and developing their personal abilities, making purposeful choices that are influenced by perceived and actual social, economic and cultural constraints, and engaging with education and employment systems in their schools, in their workplaces, in their local communities and in their countries.

The EEL research programme is concerned in particular with systems that aim to support young people make good education and employment linkages. In New Zealand, as in other countries, these support systems are themselves in a state of flux, reflecting the changing conceptualisations reported in this literature review (see, for example, the report on *Careers Education in New Zealand Schools* by Vaughan and Gardiner, 2007). The next phases of the EEL programme will map the support systems that are currently in place, and analyse how they interact in assisting young people during their transition years.

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