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The First Ten Years of Working Life: Towards a Comparative Analysis of Work, Benefit and Skill Trajectories among Trade Qualification and Bachelor's Degree Completers

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THE FIRST TEN YEARS OF WORKING LIFE: TOWARDS A COMPARATIVE ANALYSIS OF WORK, BENEFIT AND SKILL TRAJECTORIES AMONG TRADE QUALIFICATION AND BACHELOR'S DEGREE COMPLETERS

HEATHER FEHRING, JEFF MALLEY AND LYN ROBINSON

Where does skill go after initial post-school qualification? While supply-side policies stimulate a flow of qualified young people into the workforce, very little is known about the subsequent job and skill trajectories that different types of qualified people experience. In this paper we compare the experiences of RMIT trade and bachelor degree completers during the first 10 years of their working lives. Our research uses a retrospective life-course approach to consider changes in occupation, employment, skills and benefits, from the point-of-view of individual skilled workers. Its emphasis on the mapping of individual workers' experiences contrasts with the prevailing focus on 'enterprise' within discourses of human capital and human resource management. Patterns discerned in workers' individual trajectories suggest that not all decisions to change employer or occupation are based on rational investment decisions, and that new skills are just as likely to be acquired on the job as they are by attending a formal course of study. This study considers the effects of gender, relationships and family formation on occupational changes and skills acquisition. Among its conclusions, the study recognises that growth in the productivity of skilled workers may require interventions and models of support other than traditional institutionalised learning and selective staff development. It also suggests that trade occupations have been undervalued as a career starting point.

INTRODUCTION

At a time of skills shortage, rapid technological change and disruption to traditional patterns of work, there is a conspicuous absence of studies mapping and comparing individual trajectories of labour-market participation, skills acquisition and career development, for different types of skilled workers. Among other things, this absence has helped reinforce a widespread perception, particularly among youth and their career advisors, of the limited value and flexibility of trade occupations. It has also contributed to the dependency of governments and employers on outmoded education and training policies, and misguided recruitment and retention practices.

This study compares two cohorts of young people who have completed either a traditional post-school trade apprenticeship or a bachelor's degree in applied science and technology at RMIT, and have entered the workforce. The study considers the major life events and occupational transitions experienced by these workers—both individually, and as differential groups—over the course of a 10-year period commencing with the attainment of their respective qualifications.

Two questions underpin the design and formation of the study, each relating to issues of skill shortages and the public and private value accorded to different types of qualifications and occupation. The first question asks: for two groups of differently qualified young skilled workers (trade apprentices and bachelors), where do initial qualifications take them over the first 10 years of working life? The second question asks whether the experiences of the two groups are substantially different—and if so, how and why. These questions are of particular relevance at a time when public funding and private values have favoured the expansion of pathways to university on the grounds that university study results in higher public and private returns—even in an environment where ongoing trades-based skill shortages have been identified as a major impediment to economic growth.

In terms of the present study, these questions are focused on the individual, rather than the enterprise or the State, on the assumption that skilled individuals in many cases initiate their own movements within the labour market. Our tracking of individual employment histories across occupations and enterprises is a critical response to the literature of human resource management, which is often concerned exclusively with enterprise and the various strategies available to it for reducing workforce turnover, improving organisational learning and increasing productivity (Rowold & Schilling 2006). It is anticipated that in an extended period of skill shortages, higher rates of skill depreciation and consequent occupational shifts will have a considerable impact on workforce composition and quality. In rapidly changing economies and labour markets there is a need to know more about the comparative trajectories of key groups of skilled young workers as they proceed from labour-market entry to experienced-worker status, through a range of different and changing employment and social situations.

BACKGROUND

Two related developments within the literature on skill and work, mainly from economics and sociology, have influenced the design of this project. The first is the changing nature of inquiry into the returns on investment in education (Blundell, Dearden & Sianesi 2004; McIntosh 2002). The second is the emergence of various forms of longitudinal techniques to investigate occupational progressions throughout working life (Mayer 2000; Ruspini 1999; Walters 2002; Ziguras 2005). Each of these developments is related to the skills shortage situation, albeit in slightly different ways.

Occupational choice and career advice is often influenced by the differential returns—i.e., earnings—received by people with different levels of qualification and skill. It is often assumed, for example, that high earnings are automatically received by those with high-level qualifications. In many countries this has contributed to a situation in which young people are encouraged to seek a university degree as an entry-level qualification, and discouraged from pursuing a traditional trade. In Australia, while there are skill shortages across a range of 'professional' occupations that do require university qualifications, there are also significant shortages in many of the skilled trade occupations which are affecting the capacity of some industries to maintain growth (Australian Industry Group 2006). Perceptions that tradespeople neither earn as much as graduates, nor stay for long in the occupation for which they are qualified, have served to discourage young people from entering trades occupations (Martin 2007; Toner 2003). In responding to this situation, governments need to do more than simply increase numbers of entrants into areas of high demand; they must also consider the longevity of skilled workers within these high-demand areas. Front-end supply adjustment models—in which governments influence the availability and composition of vocational post-school courses in response to industry demand—have been criticised on a number of grounds. Challenging the narrow 'economic saviour' role ascribed to this type of governmental response, Grubb (2004) belongs to a growing body of researchers who suggest that skill-supply issues involve a complex set of interactions between individuals, enterprises, and social factors associated with particular industries, regions and family circumstances, and that such issues consequently require more holistic and inclusive approaches to information gathering, theory formation, and policy implementation (Andres 2005; Dex et al. 1998; Wayne, Randell & Stevens 2006; Fevre, Rees & Gorard 1999; Valentin 2006). Complexity and change with regard to individual skill, qualification and productivity may require the application of micro and work-historical approaches, as well as greater sensitivity to social and power relationships informing such issues (Grugulis & Stoyanova 2006; Lewis 2007; Pankhurst & Livingstone 2006; Spitz-Oener 2006). From a policy and forecasting perspective, any adequate response to skill shortages will require, at the very least, detailed knowledge of the dynamics of occupational choices.

As we construe the available literature, a shift is occurring away from coarse macro, socio-economic, point-in-time analyses of work, income, qualifications and skills, towards approaches that are more sensitive to

the particular context and sequence of individual occupations and biographical trajectories. For example, Blundell, Dearden and Sianesi (2004) have rejected models that assume a direct correlation between returns to investment and educational qualifications, arguing instead for multiple-treatment models which assign differential earnings to complex causes. McIntosh (2002) has queried the capacity of large-scale cross-sectional surveys to adequately measure private 'returns to investment' in education, suggesting instead longitudinal approaches with more sensitive measures of earnings. A novel dimension in 'rate of return' studies has been the concept of 'benefit' which encompasses variables other than simple 'earnings'; an emerging body of research suggests that not everyone has the opportunity to enact occupational preferences which would maximise earnings, and that others prefer benefits such as working hours and location to earnings per se, as they attempt to strike an appropriate work/life balance (Fevre 2003; Fevre, Rees & Gorard 1999; Hutton 2005; Schuller et al. 2001; Schuller et al. 2004).

In order to address this kind of complex (seemingly economically 'irrational') fluctuation in labour markets, various longitudinal studies of skills acquisition and occupational change have been proposed and undertaken (Bartel 2000; McIntosh 2005). More generally, since the 1990s there has been an upsurge of interest in different types of longitudinal methods. National panel studies for countries like the UK, Germany and Australia currently track members of individual households with regard to individual and household changes in employment, income, asset ownership, family formation and wellbeing (BHPS 2006; HILDA 2007; SOEP 2007). These are studies which, at set intervals (typically, every 12 months), record individual states across a range of activities and attitudinal variables. It should be noted, in light of the above discussion, that terms such as 'holism', 'dynamics' and 'bi-directional influences' are now routinely factored into various forms of longitudinal study.

Our research is designed around the concept of the individual 'life course', a theoretical construct comprising discrete 'life events'. A life-course perspective maintains that 'any point in the life span must be viewed dynamically as the consequence of past experience and future expectation as well as the integration of individual motive with external constraint' (Giele & Elder 1998: 19). A life-course approach thus emphasises the importance of human agency and the bi-directional relationship between individuals and their social and historical settings, or as Elder suggests, 'the intersection of social and historical factors with personal biography' (cited in George 1993: 358). In terms of the initial design of the project, the appeal of the life-course approach lay in its accommodation of exploratory techniques for describing and classifying patterns of occupational change and related factors over time for a given population, and in the richness of information it potentially yielded by way of individual stories and journeys. The adoption of a mixed methodological approach—comprising 'sequence' analytic techniques[1] which would first identify groups with similar patterns of work, life and learning histories, from which data a series of detailed case studies would then be selected and structured—presented itself as a plausible solution to the problems identified by Andre (2005) of moving between macro and micro perspectives.

METHODOLOGY

The current project uses a retrospective longitudinal design, informed by principles of life-course research methodology, to investigate the occupational trajectories of two groups of young, post-school-qualified

[1] Dex's work on the job sequences of British women in the workforce and the impact of childbearing is an early example of a large-scale application and review of sequence methodologies. This was closely followed by a special issue of *Sociological Methods and Research* in which Optimal Matching Analysis was defended as an appropriate technique for the social sciences (Abbott & Tsay 2000). More recently Halpin (2003), Elzinga (2003) and Pollock (2007) have illustrated the exploratory capacity of sequence techniques as precursors to theory formation and explanation (as distinct from description and association). Billari and Piccaretta (2005) note that demographic 'life courses' are sequences, and present a useful discussion on the application of sequence techniques, giving consideration to distinctions of focus (holistic/atomistic) as of time (prospective panel study/retrospective construction).

workers—respectively, RMIT trade qualification and RMIT bachelor's degree completers—over the first 10 years of their working lives. The aim of the project is to provide a detailed and dynamic portrait of the ways in which qualified workers find employment, seek promotion, develop additional skills, tailor their careers, and in general derive a range of benefits from their education or training. The project also attempts to identify the factors, motivations and critical events influencing participants' decision-making at various stages in their respective occupational trajectories. Accordingly, the research design has been constructed around the three interrelated themes of employment and work changes, significant life events, and skill/qualification changes. The design is deliberately exploratory and not intended to be representative. To minimize variation, however, membership of the sample frame (a pseudo cohort) was restricted on the basis of selection for each of the following characteristics:

- 24 years of age or under at the time of course completion;
- an Australian resident or citizen;
- completed their course in either 1994, 1995 or 1996 from the same institution (RMIT); and
- completed vocational qualifications in comparable fields of construction, electronics and electrical, mechanical, health, hospitality, and certain other fields of applied science for the bachelor graduates.

Data gathering was designed to occur in three stages. Stage 1 data collection occurred in early 2007 via a mailed self-report questionnaire, providing retrospective descriptions of education outcomes and employment journeys with respondent explanation as to why and how particular occupational or life events occurred. This process yielded a total of 179 respondents, comprising 54 former apprentices and 125 higher education graduates. During the second half of the year, additional Stage 2 data were obtained from a sub-sample of Stage 1 respondents through an extended telephone interview with 29 former apprentices and 65 degree graduates. From these a small number (n=12) of intensive case studies were selected to explore various interactions between job histories, skills development and other life events, during Stage 3 of the project.

Note that, as shown in Tables 1, 2 and 3, the number of females in the sample of former apprentices is very low. Hence, in all of the tables that follow, when reporting results as percentages of the samples by gender, for apprentices the column for females has been excluded.

Table 1: Number of participants, by gender

	APPRENTICES			GRADUATES		
	M	F	P	M	F	P
Stage 1	49	5	54	53	72	125
Stage 2	27	2	29	26	39	65
Stage 3						

M = Males; F = Females; P = Persons

Table 2: Number of Stage 1 participants, by course completed and gender

	MALES	FEMALES	PERSONS
APPRENTICES			
Plumbing	13	–	13
Electrical/electronic	7	–	7
Refrigeration	11	–	11
Printing	12	–	12
Optical	4	3	7
Dental	1	2	3
Missing	1	–	1
Total sample	*49*	*5*	*54*

Table 2 (continued): Number of Stage 1 participants, by course completed and gender

	MALES	FEMALES	PERSONS
GRADUATES			
Physical sciences	8	6	14
Math & computer science	8	2	10
Health sciences	9	35	44
Food & hospitality	2	10	12
Environment	8	10	18
Engineering	18	8	26
Missing	–	1	1
Total sample	*53*	*72*	*125*

Table 3: Number of Stage 2 participants, by course completed and gender

	MALES	FEMALES	PERSONS
APPRENTICES			
Plumbing	7	–	7
Electrical/electronic	4	–	4
Refrigeration	6	–	6
Printing	6	–	6
Optical	4	1	5
Dental	–	1	1
Total sample	*27*	*2*	*29*
GRADUATES			
Physical sciences	5	4	9
Math & computer science	3	1	4
Health sciences	5	18	23
Food & hospitality	1	6	7
Environment	6	6	12
Engineering	6	4	10
Total sample	*26*	*39*	*65*

FINDINGS

This paper represents a work in progress, and provides an overview of the quantitative data gathered during the first two stages of our research.

i. Occupation and Employment Outcomes

In general, graduates indicated a broader range of reasons for undertaking their post-school qualifications than did trade apprentices. Table 4 (cf. Appendix 1.2.2 Table 6) shows the strong influence of family on decision-making in relation to post-school options. Such influence was both direct (because a parent or sibling was already working in this occupation), or indirect (commonly, because of encouragement from a parent, typically the mother). This familial influence was much stronger for apprentices (79 per cent) than for graduates (28 per cent). The influence of 'significant others' such as teachers and friends was less frequently cited by respondents (7 per cent of apprentices and 11 per cent of graduates), and more often by females than by males. Almost half of the respondents in both samples (45–46 per cent) said they undertook their training because they were interested in the area of work represented by their respective qualifications. Accomplishment in a relevant subject area at school was an incentive for the higher education group (40 per cent), but not for apprentices (3 per cent). Relevant work experience while at school was noted as an influence on subsequent choice of career pathways by 14 per cent of apprentices and 11 per cent of graduates. Among apprentices, both good career prospects (31 per cent) and access to income while training (17 per cent) were cited as important factors influencing the decision to pursue a trade qualification.

Table 4: Initial influences on post-secondary career and higher education studies (per cent of Stage 2 respondents)

	APPRENTICES		GRADUATES		
	M	P	M	F	P
Family influence	81	79	31	26	28
Significant other (teachers, friends)	4	7	4	15	11
Good at this subject area while at school	4	3	35	44	40
Relevant work experience while at school	15	14	8	13	11
RMIT Open Day	–	–	23	26	25
RMIT course reputation	–	–	8	33	23
Interested in this area of work	48	45	54	41	46
Good career prospects	33	31	27	8	15
Advantage of income while training	15	17	12	–	5
Constrained choice	26	28	15	13	14
Other	11	14	12	21	17
Number of respondents	*27*	*29*	*26*	*39*	*65*

M = Males; F = Females; P = Persons

Percentages total more than 100 due to multiple responses

For our sample, individual workforce participation at or about the age of 34 (some 10 to 11 years after course completion) is influenced by gender as well as initial type of qualification. At the time of survey, 94 per cent of male respondents were employed full-time. Only 53 per cent of women were similarly engaged, with a further 30 per cent working part-time while engaged in family care, 13 per cent not working, and an additional 4 per cent on maternity leave. Just 2 per cent of surveyed males were unemployed and looking for work.

Initial findings indicate a relatively high level of retention within the broad trade and professional domains represented by the initial post-school qualifications obtained by respondents. As shown in Table 5 below, the majority of our sample—52 former apprentices and 109 graduates—were either full-time or part-time labour force participants in 2007. Of these, almost three quarters of those with trade qualifications indicated that they were still working as tradespersons, compared with 65 per cent of bachelor graduates who were still working in professional or technical domains related to their initial qualification (see Appendix 2.2 Tables 10 and 11). Many respondents had advanced to supervisory positions but nevertheless identified themselves as specific trade or professional practitioners—an identification which appears to be especially strong among tradespersons, even in cases where they had progressed their careers to become directors of their own companies employing other people.

Table 5: Occupation of labour force participants in 2007

	APPRENTICES			GRADUATES		
	M	F	P	M	F	P
Managers	6	–	6	17	8	25
Professionals	–	–	–	30	41	71
Technicians & trades workers	36	2	38	–	3	3
Community & personal service workers	2	1	3	–	2	2
Clerical & administrative workers	2	1	3	1	4	5
Sales workers	2	–	2	–	1	1
Machinery operators & drivers	–	–	–	2	–	2
Total respondents	48	4	52	50	59	109

M = Males; F = Females; P = Persons

As shown in Table 6, at the end of their first 10 years of working life, trade-qualified people were more likely to be either self-employed (12 per cent) or an employer with employees (a further 16 per cent), than were those holding bachelor's degrees (5 and 4 per cent respectively). However, a greater proportion of bachelors occupied senior management positions as employees: 23 per cent, compared with 12 per cent of the trade group (see Appendix 2.2 Table 11). Bachelor's degree completers were more likely to be engaged in employment on a fixed-term contractual basis (8 per cent, compared with nil tradespersons), as shown in Table 6 below (cf. Appendix 2.4 Table 13).

Table 6: Aspects of current employment, percentage of labour force participants in 2007

	APPRENTICES		GRADUATES		
	M	P	M	F	P
Employment status					
Permanent/continuous employee	70	71	80	79	80
Fixed term	–	–	10	7	8
Casual employee	–	2	–	7	4
Self-employed, without employees	13	12	6	3	5
Employer with employees	17	16	4	3	4
Employment sector					
Private	98	92	86	52	68
Public	2	8	14	48	32

M = Males; F = Females; P = Persons

Percentages may not total 100 due to rounding

At first glance, a comparison of benefits at the end of the first 10-year work period suggests a pattern that conforms with conventional economic thought, and especially the doctrine that higher levels of education yield a greater return in terms of income and other benefits. After 10 years, mean monthly normal net income for full-time employed male bachelor graduates was higher ($5,369) than for full-time employed males with initial trade qualifications ($4,143). Female full-time employed bachelor graduates earned an average of $4,653—less than their male counterparts but more than males with trade qualifications. Almost one quarter (24%) of degree-qualified males achieved a net monthly income in excess of $6,500—compared with just 11 per cent of female graduates, and five per cent of trade-qualified males (see Appendix 5.3 Table 28).

Using summary statistics the picture thus far is familiar and conventional. That is, there are significant differences in labour-market outcomes based on gender and initial post-school qualifications. On average, those with trade qualifications earned less than those with university qualifications and men earned more than women. Also, those with trade qualifications were more likely to be business owners whereas people with bachelor's degrees were more likely to be employees, albeit at senior management levels. The problem with this type of summary reporting is that it encourages generalisation with regard to the relative value and worth of respective occupations, and tends to shift discussion away from sub-group occupational pathways (e.g. to self-employment or owner/manager) and other measures of benefit and worth. The richness and variation in occupational benefits that are disguised by a reliance on end-point summary statistics become more evident as data-gathering methods become more open-ended and are subject to dialogue between researcher and respondent.

Some examples from our follow-up telephone interviews, conducted during Stage 2 of the project, suggest a more complex picture about earnings and benefits. During an interview with a trade-qualified partner/director of a company, a question relating to additional sources of income revealed that at the end of each financial year, profits were distributed among partners who did not consider them to be a part of normal individual earnings. Consequently, this additional income was not identified in responses to questions about normal wage or salary income. In the course of another interview we found a trade-qualified person who, as a result of injury, had downshifted to a sales position, earning a base salary plus commission in an unrelated industry. As a newcomer to this type of work, his earnings were reported on his base salary at that particular time, but at a much lower level than anticipated.

ii. Perceived benefits and job satisfaction

Respondents to the Stage 1 written questionnaire were asked an open-ended question about the benefits of their job (either their current job, or the most recent job if they were not currently in the labour force). Multiple responses were coded, and the results are displayed in Table 7 (cf. Appendix 5.1 Table 26).

Table 7: Job benefits (per cent of Stage 1 respondents)

	APPRENTICES		GRADUATES		
	M	P	M	F	P
Financial benefits	34	**33**	27	14	20
Working hours	28	**33**	6	33	21
Job satisfaction/enjoyment	32	**29**	29	23	**26**
Longer-term prospects	23	23	20	9	13
Working conditions	21	21	41	21	**30**
Learning at work	13	13	37	39	**38**
Work relationships	11	10	10	27	20
Interesting work	6	8	10	19	15
Location	9	8	12	16	14
Workplace culture	2	2	8	11	10
Number of respondents	*47*	*52*	*51*	*70*	*121*

M = Males; F = Females; P = Persons

Percentages may not total 100 due to multiple responses.

During Stage 2, respondents were asked to indicate their feelings about their current or most recent jobs. Overall, this question elicited similar responses from both trade-qualified and higher education graduates. For instance, there was little variation between the two samples in their level of agreement with items concerning their pay and working conditions, and their relationships with co-workers. Each of these aspects of their jobs was viewed positively by a very large majority of both groups. As shown in Table 8 (cf. Appendix 5.2 Table 27), the one item on which responses differed significantly concerned working hours, with a larger proportion of apprentices (45 per cent) than graduates (23 per cent) indicating that they did not have sufficient access to flexible working times. Nevertheless, this was not significant enough to be a major source of dissatisfaction. In fact, as shown in Table 7 above, one third of the trade-qualified sample listed their working hours as one of the main benefits of their job.

Our research shows that large percentages of both trade and bachelor cohorts—and on average, more males than females—received some form of income apart from the wages or salary earned in their main occupation. Similar proportions (three to four in ten) of each sample indicated that they owned investment properties. Tables 29 and 30 (see Appendix) show only slight differences between the two samples in either the mean values of their homes, or rates of home ownership.

Almost identical percentages of each group indicated that they were satisfied with their health (80–81 per cent), their family life and the neighbourhood in which they lived (both 85–87 per cent). Similarly, there was little variation between the two samples in levels of satisfaction with the house in which they lived, or the amount of free time they had. Although levels of overall satisfaction with their working lives were comparable between the two samples (63 per cent of apprentices and 66 per cent of graduates), slightly lower percentages of apprentices than graduates responded that they were satisfied with their incomes (both personal and household), their overall financial situation, and their standard of living (see Table 9 below; cf. Appendix 6.2 Table 31).

Nevertheless, there was broad agreement—around 80 per cent of each sample—that respondents' current jobs provided them with both access to a variety of interesting work, and personal fulfilment. Nor were there marked differences between the two groups in terms of negative aspects (e.g. the impact of work-related stress). And while proportionately more apprentices than graduates (41 per cent compared with 29 per cent) saw their jobs as intruding too much into their private lives, an even larger proportion of apprentices (55 per cent) disagreed with that statement. As shown in Table 8, around 70 per cent of respondents in each sample were optimistic about their career prospects. A conspicuous gender gap among graduates in relation to their perceived prospects of promotion—67 per cent of males compared with 41 per cent of females—is shown in Table 9.

Table 8: Feelings about your current job

	APPRENTICES			GRADUATES		
	A	N	D	A	N	D
Working conditions						
I get paid fairly for the things I do in my job	83	7	10	89	6	5
Males	*85*	*7*	*7*	*100*	–	–
Females	–	–	–	*82*	*10*	*8*
My working conditions are good	86	7	7	86	9	5
Males	*89*	*7*	*4*	*89*	*12*	–
Females	–	–	–	*85*	*8*	*8*
My working times can be flexible	52	3	45	71	6	23
Males	*48*	*4*	*48*	*81*	*8*	*11*
Females	–	–	–	*64*	*5*	*31*
I get on well with my co- workers	96	4	–	95	3	2
Males	*96*	*4*	–	*100*	–	–
Females	–	–	–	*92*	*5*	*3*
Skills						
I use many of the skills acquired in my initial training in my current job	79	14	7	69	11	20
Males	*78*	*15*	*7*	*62*	*15*	*23*
Females	–	–	–	*74*	*8*	*18*
My job requires me to take initiative	97	0	3	91	5	5
Males	*96*	–	*4*	*92*	*8*	–
Females				*90*	*3*	*8*
My job is complex	86	7	7	80	12	8
Males	*85*	*7*	*7*	*89*	*8*	*4*
Females	–	–	–	*74*	*15*	*10*
My job is difficult	69	14	17	49	35	15
Males	*70*	*15*	*15*	*65*	*35*	–
Females	–	–	–	*39*	*36*	*26*
I have a lot of freedom to decide how I do my own work	66	14	21	82	6	12
Males	*67*	*11*	*22*	*85*	*8*	*8*
Females	–	–	–	*80*	*5*	*15*
I have a lot of choice in deciding what I do at work	66	17	17	55	14	31
Males	*67*	*15*	*19*	*54*	*19*	*27*
Females	–	–	–	*56*	*10*	*33*
My job requires me to do the same things over and over again	38	17	45	48	22	31
Males	*33*	*19*	*48*	*46*	*19*	*35*
Females	–	–	–	*49*	*23*	*28*
My job provides opportunities to improve my skills and knowledge	90	7	3	86	6	8
Males	*89*	*70*	*4*	*89*	*4*	*8*
Females	–	–	–	*85*	*8*	*8*
My job often requires me to learn new skills	86	3	10	75	14	11
Males	*85*	*4*	*11*	*89*	*8*	*4*
Females	–	–	–	*67*	*18*	*15*
Job satisfaction						
My job gives me a sense of personal fulfilment	83	3	14	88	9	3
Males	*82*	*4*	*15*	*81*	*15*	*4*
Females	–	–	–	*92*	*5*	*3*
My job is more stressful than I had imagined	45	10	45	38	34	28
Males	*48*	*11*	*41*	*39*	*31*	*31*
Females	–	–	–	*39*	*36*	*26*
My job intrudes too much on my private life	41	3	55	29	25	46
Males	*44*	*4*	*52*	*35*	*15*	*50*
Females	–	–	–	*26*	*31*	*44*
Looking ahead						
I worry about the future of my job	31	7	62	22	12	66
Males	*30*	*4*	*67*	*23*	*19*	*58*
Females	–	–	–	*21*	*8*	*72*
My job has good career prospects	72	10	17	71	17	12
Males	*74*	*11*	*15*	*81*	*15*	*4*
Females	–	–	–	*64*	*18*	*18*

Refers to current job, or most recent job if not currently employed.

Percentages based on Stage 2 responses (n = 29 apprentices, 65 graduates).

Percentages may not total 100 due to rounding.

A= Agree; N = Neither agree nor disagree; D = Disagree.

Table 9: Satisfaction with various aspects of your life, by sample and gender (per cent of Stage 1 respondents)

Satisfaction with . . .	APPRENTICES			GRADUATES		
	S	N	D	S	N	D
your health	81	9	9	80	7	13
Males	*82*	*10*	*8*	*79*	*11*	*9*
Females	–	–	–	*81*	*4*	*15*
the amount of free time you have	39	33	28	36	27	37
Males	*43*	*31*	*27*	*38*	*25*	*38*
Females	–	–	–	*35*	*29*	*36*
your family life	87	6	7	85	8	7
Males	*88*	*6*	*6*	*91*	*7*	*2*
Females	–	–	–	*81*	*8*	*11*
the neighbourhood in which you live	87	9	4	85	11	4
Males	*88*	*8*	*4*	*87*	*8*	*6*
Females	–	–	–	*83*	*14*	*3*
the house/flat in which you live	91	6	4	85	8	7
Males	*90*	*6*	*4*	*85*	*9*	*6*
Females	–	–	–	*85*	*7*	*8*
your standard of living	85	11	4	94	4	2
Males	*83*	*13*	*4*	*94*	*4*	*2*
Females	–	–	–	*94*	*4*	*1*
your personal income	68	13	19	74	14	12
Males	*67*	*15*	*19*	*77*	*8*	*15*
Females	–	–	–	*72*	*18*	*10*
your household income	70	20	9	77	15	9
Males	*69*	*20*	*10*	*77*	*11*	*11*
Females	–	–	–	*76*	*17*	*7*
your financial situation overall	70	19	11	80	6	14
Males	*69*	*18*	*12*	*81*	*6*	*13*
Females	–	–	–	*79*	*7*	*14*
your working life overall*	63	22	15	66	24	10
Males	*64*	*21*	*14*	*65*	*21*	*15*
Females	–	–	–	*67*	*27*	*6*
your prospects for promotion in your job**	28	33	38	52	34	14
Males	*29*	*34*	*37*	*67*	*20*	*13*
Females	–	–	–	*41*	*44*	*15*
with your life as a whole	81	13	6	94	3	2
Males	*82*	*12*	*6*	*94*	*4*	*2*
Females	–	–	–	*94*	*3*	*3*

* Refers only to those currently employed; n = 46 apprentices, 112 graduates.

** Refers only to current employees, excludes self-employed; n = 39 apprentices, 106 graduates.

Percentages may not total 100 due to rounding.

S= Satisfied; N = Neither satisfied nor dissatisfied; D = Dissatisfied.

iii. Employment Journeys

As noted above, it is incumbent upon policy makers, in light of significant skill shortages, to consider the real-world occupational trajectories of qualified workers. In terms of the present study, the question 'where does skill go?' was framed to investigate the relative dispersion of vocationally qualified young people in the 10 years after initial course completion. Respondents' answers, on occasion, ran contrary to expectations born of an over-reliance on summary statistics and labour-market stereotypes: two of the bachelor graduates, for example, had become train drivers at the time of survey, one with post-graduate qualifications, both with successful 'traditional' career pathways prior to this latest occupational transition; another had significantly altered his/her occupational trajectory by electing to pursue full-time studies in medicine.

One measure of the retention of skills within the workforce is the number of people who stay in the same job and/or with the same employer for extended periods of time. From the viewpoint of worker and employer alike, this might be considered a baseline measure of occupational stability—without necessarily implying skills stagnation. As a result of our small exploratory study we found that, on average, trade-qualified people stayed longer with an employer, in the same occupation and job, than did those with bachelor's degree qualifications.

As shown in Table 10 below (cf. Appendix 3.3 Table 19), employer change was more prevalent among higher education graduates than it was among former apprentices, with female graduates more likely than their male counterparts to have changed employer three or more times during their first 10 years of working life. Table 11 (cf. Appendix 2.5 Table 14) reveals that a larger percentage of apprentices—21 per cent compared with only nine per cent of graduates—had remained with their current employer for more than ten years. Our sample of former apprentices exhibits relative occupational stability, with tradespersons tending to remain with their employers, and/or in the same job, for lengthier periods of time than graduates.

There was much more fluidity within the higher education sample in terms of changes in positions with their current employers. Access to promotion with the same employer was frequently cited as a major reason for changes in graduates' job titles and responsibilities. Table 11 reveals that a significant proportion of higher education graduates (45 per cent) had been in their current position for one year or less, whereas only five per cent had been in their current position for six years or more. Within the trade-qualified sample, these figures were 23 per cent and 29 per cent, respectively.

Table 10: Various aspects of job histories (per cent of Stage 1 respondents)

During the first 10 years of working life . . .	APPRENTICES		GRADUATES		
	M	P	M	F	P
Number of new employers					
None	25	26	8	1	4
One	14	15	21	18	19
Two	29	28	21	18	19
Three	6	7	19	24	22
Four	12	11	13	15	14
Five	10	9	6	15	11
Six or more	4	4	12	9	11
Mean number of new employers	*2.18*	*2.09*	*2.89*	*3.14*	*3.03*
Number of promotions					
None	73	76	30	38	34
One	18	17	21	24	22
Two	4	4	11	29	22
Three	–	–	19	6	11
Four or more	4	4	19	4	10
Mean number of promotions	*.47*	*.43*	*2.06*	*1.15*	*1.54*
Self-employment					
Ever self-employed	33	30	21	11	15
Ever an employer	8	7	6	1	3
Ever self-employed or employer	37	33	21	11	15
Number of periods of unemployment/redundancy					
None	90	89	77	92	86
One	10	11	17	6	10
Two	–	–	6	1	3
Three	–	–	–	1	1
Employer 'loyalty'					
Still with same employer as when training	20	22	9	3	6
Still with same employer as first job after qualifying	2	2	11	10	10
Have had only one employer	22	24	21	13	16
Number of times workforce participation was reduced in order to study					
None	98	98	79	69	74
One	2	2	11	22	18
Two	–	–	9	6	7
Three	–	–	–	3	2
Change of career	8	11	15	15	15
Worked while overseas	18	19	42	31	35
Number of respondents	*49*	*54*	*53*	*72*	*125*

M = Males; F = Females; P = Persons.

Percentages may not total 100 due to rounding.

Table 11: Length of time in current job (per cent of labour force participants)

	APPRENTICES		GRADUATES		
	Males	Persons	Males	Females	Persons
Number of years in current job					
One year or less	23	23	43	47	45
2 years	19	19	20	20	20
3–5 years	29	29	33	27	30
6–10 years	23	21	4	5	5
More than 10 years	6	8	–	–	–
Mean number of years in current job	*4.18*	*4.35*	*2.35*	*2.37*	*2.36*
Number of years with current employer					
One year or less	17	17	20	19	19
2 years	17	15	12	17	15
3–5 years	29	31	30	27	29
6–10 years	17	15	28	29	29
More than 10 years	21	21	10	8	9
Mean number of years with current employer	*5.69*	*5.85*	*5.06*	*4.96*	*5.0*
Number of years in current occupation					
One year or less	2	2	–	3	2
2 years	4	4	2	2	2
3–5 years	4	6	6	12	9
6–10 years	31	31	71	52	61
More than 10 years	58	58	20	31	26
Mean number of years in current occupation	*10.69*	*10.7*	*8.94*	*8.7*	*8.8*

iv. Learning Journeys

Continuing participation in formal study after initial qualification is a marked feature of our sample of RMIT graduates. Overall, more than half (56%) of the higher education sample had undertaken study towards an additional formal qualification during the first ten years of working life (see Appendix 4.1 Table 23). This is reflected in graduates' employment histories: 26 per cent of the higher education sample had reduced its participation in the labour force in order to engage in further study (generally by combining part-time or full-time study with part-time work)—compared with only two per cent of the trade-qualified sample (see Appendix 3.3.6 Table 19; Appendix 3.4 Table 21). Tradespersons, on the other hand, were more likely than graduates to have engaged in learning activities which led to authorities and passes to practice particular skills and occupations, specialised licences and other forms of industry accreditation.

As shown in Table 12 (cf. Appendix 4.2 Tables 24 and 25), when asked to rate the impact of different types of learning on the development of job skills since completing their initial qualification, 82 per cent of trade and 78 per cent of bachelor respondents indicated that learning on the job from workmates, colleagues and others was very important. Sixty per cent of each sample rated self-teaching through problem solving, thinking, reading and accessing the Internet, as very important. Significantly, less than half of either group—31 per cent of tradespeople, 41 per cent of bachelors—rated different forms of formal course-based learning as very important for skills development. Table 12 also reveals that a greater proportion of former apprentices rated short courses offered by trade and professional associations as very important in terms of learning new job skills (19 per cent, compared with 10 per cent of degree graduates).

Table 12: Relative importance of methods of learning job skills; percentages of respondents indicating 'important' and 'very important' (per cent of Stage 1 respondents)

	APPRENTICES			GRADUATES		
	V	I	C	V	I	C
Learning on the job	82	12	94	78	20	98
Self-tuition	60	38	98	60	37	97
Employer-provided training	25	58	83	18	60	78
Formal learning at TAFE or university	31	32	63	41	32	73
Short courses (not employer-provided)	19	33	52	10	44	54

V = 'Very Important'; I = 'Important'; C = Combined

DISCUSSION

Where does skill go? After 10 years from course completion about 70 per cent of the two groups of skilled young workers considered in this study were engaged in occupations associated with their initial qualification. While many had moved to supervisory, management and owner positions, they still identified themselves occupationally as practitioners in their field. This finding of relatively high levels of occupational retention surprised us, given the language of change and flexibility evident in many futurist and policy documents on workplace reform. On the other hand, our research indicates that a range of personal circumstances (e.g. childbirth, family illness, marital relations) as well as broader issues (unsafe work practices, employee redundancy due to company restructuring, etc.) frequently impinge, in complex ways, on what Walters (2002) calls the 'traditional linear model' of labour market participation.

Two issues present for discussion from our interim findings. The first is the changing nature of skills acquisition and other learning that may be overlooked by standardised occupational classification systems and census-type questions about occupational status. The second is the

need to more closely examine the trajectories of the 30 per cent who no longer identify their current occupation with their initial qualification. Although many workers in this category are upwardly mobile and tailor their career trajectories accordingly, a significant number relate stories of sexual harassment, injury and ill health as motivators of job movement.

Requiring further analysis are the differences between the two qualification groups, and between men and women, on rates of employer change. Does the contemporary degree graduate consider workplaces as mere stepping stones or ladders to climb, seeking promotional opportunities across employers and occupations any more actively than would a trades-qualified person? Or could it be the structuring of the professional job marketplace for degree graduates, in a deregulated industrial environment, that encourages this behaviour? Why are those with trade qualifications more 'loyal' to an employer, in terms of job longevity, than are degree graduates? Do relative differences in employer turnover between these two groups reflect differential capacities to undertake workplace negotiation and adapt to change?

Questions about the nature of learning among skilled workers also emerge from these initial findings. A common response across both groups was the retrospective assessment that self-directed and peer-based learning in the workplace are more important for ongoing skills development than formal course-based education. Significantly, however, for trades persons such forms of learning were likely to be an effect of skills consolidation and quality improvement within the practice of their trade with an ongoing employer—whereas for bachelors it more often related to skills improvement and job advancement through employer change.

In addition to a recurrent pattern of occupational stability, the various pathways of occupationally divergent workers are of particular interest. At this stage of our research three subgroups are conspicuous: the owner/managers and self employed; the trans-occupational shifters (the train drivers and fireman); and the downshifters who for a variety of reasons are reluctantly in jobs where their skills and qualifications are underutilised. How do we go about applying career success concepts (Feldman & Ng 2007) across this range and convey their significance to policy makers, workforce planners and young people at the cusp of making career choices? Stage 3 of this research study involves 12 in-depth case studies to examine these relationships further.

What cannot be ignored in studies such as ours, is that many women tend to have different work experiences than men, with sexual harassment, family formation and caring all impacting on women's participation in their chosen skilled occupations. While some women credited their workplaces with accommodating leave provisions and adequate return-to-work policies, others had made decisions to move on to another employment/occupational state on the basis of such considerations, often without engaging their current employer in their determinations. Organisations that fail to consider the reasons for high levels of female turnover in the workplace may be contributing to the erosion of their own skills base. They also avoid consideration of significant values informing employee satisfaction and workplace quality.

As a result of our preliminary analysis, emergent interconnections between work, learning and life, while serving to identify an apparently broad occupational stability, nevertheless entail a number of interesting between-group divergences. Previous research on workplace learning models and transitional labour markets have already identified complex relationships, and appear to be edging towards an adaptive ecological framework for analysing the dynamic interrelationships among work, life and learning. The development of such a theory is the subject of a future paper.

REFERENCES

Abbott, A and Tsay, A (2000) 'Sequence Analysis and Optimal Matching Methods in Sociology: Review and Prospect' *Sociological Methods and Research*, 29(1): 3–33.

Andres, L (2005) 'Social Capital, Perceptions and Experiences of Work and Learning: A Fifteen Year Perspective'. Paper presented at the Fourth International Conference on Researching Work and Learning, University of Technology, Sydney.

Australian Industry Group (2006) *World Class Skills for World Class Industries: Employers' Perspectives on Skilling in Australia*, Australian Industry Group, North Sydney.

Bartel, A P (2000) 'Measuring the Employer's Return on Investments in Training: Evidence from the Literature' *Industrial Relations*, 39(3): 502–524.

BHPS (2006) British Household Panel Survey Questionnaires and Survey Documents, ESRC United Kingdom Longitudinal Studies Centre, available from <http://www.iser.essex.ac.uk/ulsc/bhps/doc/pdf_versions/survey_docs/>, viewed 3 April 2006.

Billari, F C, and Piccarreta, R (2005) 'Analyzing demographic life courses through sequence analysis' *Mathematical Population Studies*, 12(2): 81–106.

Blundell, R, Dearden, L and Sianesi, B (2004) *Evaluating the Impact of Education on Earnings in the UK: Models, Methods and Results from the NCDS* (WP 03/20), Institute for Fiscal Studies, London.

Dex, S, Joshi, H, Macran, S, and McCulloch, A (1998) 'Women's Employment Transitions around Child Bearing' *Oxford Bulletin of Economics and Statistics*, 60(1): 79–98.

Elzinga, C H (2003) 'Sequence Similarity: A Nonaligning Technique' *Sociological Methods and Research*, 32(1): 3–29.

Feldman, D C and Ng, T W H (2007) 'Careers: Mobility, Embeddedness, and Success' *Journal of Management*, 33(3): 350–377.

Fevre, R (2003) *The New Sociology of Economic Behaviour*, Sage Publications, London.

Fevre, R, Rees, G, and Gorard, S (1999) 'Some Sociological Alternatives to Human Capital Theory and Their Implications for Research on Post-Compulsory Education and Training' *Journal of Education and Work*, 12(2): 117–140.

George, L K (1993) 'Sociological Perspectives on Life Transitions' *Annual Review of Sociology*, 19: 353–373.

Giele, J Z and Elder, G H, eds. (1998). *Methods of Life Course Research: Qualitative and Quantitative Approaches*, Sage Publications, Thousand Oaks, California.

Grubb, N W (2004) 'The Anglo-American Approach to Vocationalism: The Economic Roles of Vocationalism in England', Research Paper 52, ESRC Research Centre on Skills, Knowledge and Organisational Performance, Oxford and Warwick Universities, available from <http://www.skope.ox.ac.uk/WorkingPapers/SKOPEWP52.pdf>.

Grugulis, I, and Stoyanova, D (2006) 'Skills and Performance', Issues Paper 9, ESRC Research Centre on Skills, Knowledge and Organisational Performance, Oxford and Warwick Universities, available from <http://www.skope.ox.ac.uk/WorkingPapers/Issues%20Paper%209.pdf>.

Halpin, B (2003) 'Tracks through Time and Continuous Processes: Transitions, Sequences and Social Structure', University of Limerick, available from <www.ul.ie/sociology/pubs/wp2003-01.pdf>, viewed 26 May 2007.

HILDA (2007) 'Questionnaires: Overview', *The Household, Income and Labour Dynamics in Australia (HILDA) Survey*, Institute of Applied Economic and Social Research, University of Melbourne, available from <http://www.melbourneinstitute.com/hilda/questionnaires.html>, viewed 4 April 2006.

Hutton, W (2005) 'Where are the Gaps? An Analysis of UK Skills and Education Strategy in Light of the Kok Group and European Commission Midterm Review of the Lisbon Goals', The Work Foundation, available from <http://www.theworkfoundation.com/assets/docs/publications/150_Where%20are%20the%20gaps.pdf>.

Lewis, P (2007) Review of *Skills, Training and Human Resource Development: A Critical Text* by Irena Grugulis (Macmillan, Palgrave, 2007), *Human Resource Management Journal*, 17(3): 307–308.

Mayer, K U (2000) 'Promises Fulfilled? A Review of 20 Years of Life Course Research' *European Journal of Sociology* XLI(2): 259–282.

McIntosh, S (2002) 'Further Analysis of the Returns to Academic and Vocational Qualifications', Research Report 370, Centre for Economic Performance, London School of Economics.

McIntosh, S (2005) 'Using Psuedo Cohorts to Track Changes in the Qualifications of National Populations', Research Report 621, Centre for Economic Performance, London School of Economics.

Martin, B (2007) 'Skill Acquisition and Use across the Life Course: Current Trends, Future Prospects', National Centre for Vocational Education Research, available from <http://www.ncver.edu.au/publications/1747.html>, viewed 26 June 2007.

Pankhurst, K V and Livingstone, D W (2006) 'The Labour Process: Individual Learning, Work and Productivity' *Studies in Continuing Education*, 28(1): 1–16.

Pollock, G (2007) 'Holistic Trajectories: A Study of Combined Employment, Housing and Family Careers by Using Multiple Sequence Analysis' *Journal of the Royal Statistical Society* Series A, 170(1): 167–183.

Rowold, J and Schilling, J (2006) 'Career Related Continuous Learning: Longitudinal Predictive Power of Employee's Long Term Job and Career Attitudes' *Career Development International*, 11(6): 489–503.

Ruspini, E (1999) 'Longitudinal Research and the Analysis of Social Change' *Quality and Quantity: The European Journal of Methodology*, 33(3): 219–227.

Schuller, T, Bynner, J, Green, A, Blackwell, L, Hammond, C, Preston, J and Gough, M (2001) 'Modelling and Measuring the Wider Benefits of Learning', Centre for Research on the Wider Benefits of Learning, Institute of Education, University of London.

Schuller, T, Preston, J, Hammond, C, Brassett-Grundy, A, and Bynner, J (2004) *The Benefits of Learning. The Impact of Education on Health, Family Life and Social Capital*, Routledge-Falmer, London and New York.

SOEP (2007) 'Questionnaires', The German Socio-Economic Panel Study (SOEP), The German Institute for Economic Research, DIW Berlin, available from <http://www.diw.de/deutsch/questionnaires_/a_a_name_sixcms_33919_/a_a_href_javascript_sixcms_editlink_33919_24_img_src_/sixcms/admin/pics/editlink_gif_border_0_hspace_2_alt_edit_/_/a/33919.html>, viewed 12 May 2006.

Spitz-Oener, A (2006) 'Technical Change, Job Tasks, and Rising Educational Demands: Looking Outside the Wage Structure' *Journal of Labor Economics*, 24(2): 235–270.

Toner, P (2003) *Declining Apprentice Training Rates: Causes, Consequences and Solutions*, Australian Expert Group in Industry Studies, University of Western Sydney.

Valentin, C (2006) 'Researching Human Resource Development: Emergence of a Critical Approach to HRD Enquiry' *International Journal of Training and Development,* 10(1): 17–29.

Walters, M (2002) 'Labour Market Participation and the Married to Sole Mother Transition', in T. Eardley and B. Bradbury (eds) *Competing Visions: Refereed Proceedings of the National Social Policy Conference*, 2001 SPRC, University of New South Wales.

Wayne, J, Randell, A, and Stevens, J (2006) 'The Role of Identity and Work-Family Support in Work-Family Enrichment and its Work-Related Consequences' *Journal of Vocational Behaviour*, 69: 445–461.

Ziguras, S (2005) 'Transitions and Risks of Exclusions in the Australian Labour Market' *Transitions and Risks: New Directions in Social Policy Conference*, The University of Melbourne, available from <http://www.public-policy.unimelb.edu.au/conference2005>.