

Learning Workers: Young New Zealanders and Early Career Development

Karen Vaughan

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Abstract Young adults' early career development is an increasingly important field of inquiry. With the complexity of modern transitions from school and the lifelong learning demands of emerging knowledge societies, governments are concerned to improve learning pathways into, and through, tertiary education and work. Young adults are exploring new learning and work possibilities and understanding these create a challenge for governments trying to validate their experiences and enhance their employability. This paper draws on integrated qualitative and statistical cluster analyses of young New Zealanders' narratives about navigating learning and work. It draws out theoretical and policy implications, suggesting that work life learning in and outside the workplace is a key feature of young adults' lives, though it is experienced differently by different groups. These experiences need to be taken into account in government policy as the value of providing a range of different learning settings, and of learning as necessarily lifelong, features increasingly in those policies—albeit in a fairly narrowly defined way.

Keywords Youth transition · Career development · Lifelong learning · Workplace learning · Knowledge society · Mixed methods

Youth Transitions to Work in New Zealand

Governments around the world are concerned with young people's transition from schooling, particularly their successful integration into the workforce and early career development. Their concerns are framed by the “increasingly indeterminate” start and end points of transition (Raffe 2001), the multi-directional as well as linear movement involved, and the different markers for, and forms of, adulthood (Arnett 2006). These transitions are also framed by a growing acknowledgement that people

K. Vaughan (✉)

New Zealand Council for Educational Research, PO Box 3237, Wellington 6140, New Zealand
e-mail: Karen.vaughan@nzcer.org.nz

are likely to have “multiple careers” (Cheng 2007) that for some maybe “protean” in form—increasingly managed by the learner rather than only by the organisation for which they work (Hall and Mirvis 1996). The concept of “career” has moved away from being seen as an outcome—getting or keeping a job—to an evolving sequence of life experiences across working life (Arthur et al. 1999). Thus, it is no longer a question of young people receiving career guidance to make single vocational matches based on aptitudes revealed through measure of school-based achievement and/or extra-curricular interests. Instead, the constant changing nature of occupations and identities requires a conception of “career development” that focuses on *managing* life, career, work, and learning decisions *throughout* life and at any age. Policy documents from around the world, therefore, now cite the role of tertiary education as one of preparing people for a life of greater complexity involving frequent job and contract status change, greater probability of self-employment, global mobility, and working in world of more fluid organisational structures (Santiago et al. 2008).

Many policy messages in New Zealand have suggested that young people making seemingly messy or nonlinear transitions from school to tertiary education and work arise from not making the right choices. Policies have focused on ensuring that young people get more information, and of a higher quality, in order to make good choices, get jobs and establish a career trajectory. However, young people’s perspectives on the transition from school and what their chosen pathways mean to them have tended to be overlooked. Young people face combinations of opportunities and responsibilities that are both exciting and yet daunting for many of them.

Changes to the tertiary education system that grants equal status to industry training alongside universities and partially deregulating tertiary provision have resulted in an explosion and duplication of post-school products and services for young people to consider (although duplication in particular is now seen as counter-productive by the Government and is being reviewed). In New Zealand, the introduction of standards-based secondary school qualifications in 2002 brought a great degree of flexibility to course content and the kind of learning that can be formally recognised, thereby demanding that young people make many more decisions, at earlier stages, about different credit combinations, qualifications, and pathways *through* school.

The increased investment in school-based career education has made more information available to young people and their families yet rarely in ways that are readily made sense of by young people. Moreover, career education delivery has typically been haphazard (Education Review Office 2009; Wilson and Young 1998) and information distribution (including distributing promotional material) has been privileged over the teaching of longer-term career management strategies and skills that might arguably be more fit-for-purpose (Vaughan 2005; Vaughan and Gardiner 2007). The situation after school is further compounded by “job shopping” policies in New Zealand that can leave young people to find their own way in the labour market (Higgins 2003).

This article discusses the issue of young adults’ career development after they have participated in the labour market for several years. It argues that young adults can be understood as *learning-workers* who actively develop their careers rather than

simply enter them, and who see ongoing learning as integral to their working lives. To advance this argument, the article draws on *Pathways and Prospects*, a 5-year study of over 100 young people/young adults in transition from school to work.¹ The article first discusses the study's theoretical background and its approach to investigating the relationship between pathways and navigations (Raffe 2003). It then describes the integrated qualitative and statistical cluster analyses of interviews with young people as they first engaged with work and learning pathways after leaving school. These findings indicate the fluidity of young people's ideas about "career" and a cluster profiling approach to the analysis highlights a range of different transition strategies employed by the young people.

The article goes on to explore the early career development strategies and lifelong learning expectations captured in the final interviews, by which time the participants were young adults aged around 23 years and mainly engaged in full-time employment, with some formal and informal learning opportunities (analyses from the first years of the project). This analysis highlights some of the overall shifts in young adults' transition strategies. It uses a cluster profile approach to highlight the way in which some young adults experience lifelong learning as self-fulfilling while others experience it as burdensome.

Pathways and Prospects

Pathways and Prospects studied over 100 young people/young adults in transition from school to work from 2004 to 2009. Through the four semi-structured, hour-long interviews conducted during the 5-year period of the study, we listened to participants talk about making choices, their work and learning experiences, and their hopes and fears for the future. We were particularly interested in the relationship between pathways and navigations (Raffe 2003, p. 213) and in young people's early career development and "identity investments" (Hollway and Jefferson 2000)—subjective ways of avoiding, gaining access to, or making particular meanings out of experiences, which in turn produce an understanding in, and of, themselves as being certain kinds of people.

Our central research question—how do young people make sense of the transition from school?—was based on our curiosity about how young people manage the tricky contemporary combination of expanding opportunity and increasing "responsibilisation", where they are positioned as both the problem and solution of transition within a system that provides patchy information and a dearth of ways to make sense of it. The government agency Career Services' website has encouraged schools to take career education more seriously and to integrate career education within and across the school curriculum and Key Competencies. However, within the overall landscape, structural constraints around career decision-making, particularly at the transition-from-school point, still tend only to be recognised in terms of access to information and the exercising of choice. The focus on decision-making as individualised masks the differential distribution of risk that certain groups

¹ The Pathways and Prospects study was designed and led by the New Zealand Council for Educational Research (NZCER), a national, independent education research organisation. The project was funded through NZCER's purchase agreement with the New Zealand Ministry of Education.

of young people face (Ball et al. 2000; Evans et al. 2003; Furlong et al. 2003) and encourages young people to blame themselves if they become “lost” in the transition process (te Riele 2004).

In the original research design, we particularly wanted to avoid the idea of tracking young people’s immediate post-school education and employment status—their “destinations”—so as to draw conclusions about the state of their transition. While tracking “destinations” could have told us something useful about *what* people were doing, it would not have told us much about *what that means to them*. Other researchers have already set out some of the problems with failures to appreciate the deeper meanings of events and young people’s frames of reference, particularly for young people who are socially excluded and subject to interventions (Watts 2001; Wilford 1981). So we focused on what young people thought they were doing and how they felt about it in order to open up the possibilities that post-school “destinations” might not be a proxy for the role those pathways were playing in their lives.

Early in 2004, we recruited 114 young people (all recent school leavers) newly engaged in six major pathways. The pathways were chosen to give us a range of programme environments (fee-paying or earning-while-learning, flexible or highly structured, industry-led or academic, short-term or lengthy, urban and rural locations) and likely participant backgrounds (range of ethnicities, rural and urban, living with parents or in hostels or with friends). While we chose the pathways, our participants were volunteers and effectively chose us. We worked with the organisations to set up times that we could visit sites and directly address groups of prospective participants. There we presented our research design and answered questions before formally recruiting around 20 volunteers from each organisation. Where there were more than about 24 volunteers, we made a selection that gave us a gender balance of numbers. If it was not possible to speak to prospective participants as a group, we enlisted the help of national umbrella organisations, local branches, and individual employers to variously locate and talk to young people on our behalf, using written material we provided.

The final sample for the start of study in early 2004 is shown in the following table. The left hand column shows each pathway and the middle column shows the education course lengths for of studies for the pathway. The right hand column shows the number of participants that we recruited from that learning or learning and work pathway (Table 1).

Table 1 Recruited participants and pathways in early 2004

Pathway	Course length	Participants <i>n</i> =114
New Zealand Army: soldier and officer programmes	1–6 years	24
Technical institute: basic health and professional cookery	1 year	16
Modern Apprenticeships: trades and public sector	3 years	20
University: arts, science and teaching	3 years	14
Limited entry university: introductory arts, science and study skills	½ year	20
Youth Training (Government-funded): basic computing and administration	½–1 year	20

From the outset, we aimed to disrupt the framing of young people as the problem of transition. Our sample was, therefore, made up of young people who were engaged in a recognised pathway after leaving school—young people who had seemingly made “good choices”. This gave our study a distinct difference from those which focused on “at-risk”, or “NEET” (Not in Education, Employment, or Training) young people. While it is certainly important to have research about this most vulnerable group of young people, our focus in an important area of study, because these are the most vulnerable young people, we were particularly interested in the experiences and perceptions of those young people who were apparently making “proper” transitions. What was it like for them and did their chosen pathways mean to them what career guidance professionals, teachers, and government officials assumed?

We interviewed participants face-to-face in a range of settings (e.g. worksites, homes, or any available private space) for the first and second interviews. However, as the study progressed, we used telephone interviews more frequently as our relationships with participants were well established by then and their movements to a wider range of locations made the logistics of face-to-face interviewing very difficult. We considered ourselves closer to ‘travellers’, rather than ‘miners’, of data (Kvale 1996), which produced satisfying researcher-participant encounters but also uncomfortable moments, including us having to (re)consider our assumptions about participants’ willingness and ability to talk to a total stranger, tell the truth, share meanings with the researcher, and remember things accurately (see Vaughan 2008 for detailed examples of fieldwork dilemmas, building on Fine’s (1994) notion of “working the hyphen”).

Table 2 provides an overview of the study’s interviewing schedule. The date intervals within which interviews were conducted are shown in the left hand column. The middle column shows the number of participants interviewed and the right hand column shows percentage of the original cohort interviewed. The table shows that by the fourth interview in 2008, two-thirds of the original cohort was still participating.

The following two tables set out work and learning options for our participants at the start (Table 3) and end (Table 4) of the study to demonstrate participants’ involvement in learning throughout the course of the research. Both tables show work and learning options in the first column and the number of participants engaged with this in the column immediately to its right. Table 3 also has a far right-hand column giving details of the participants participating in work and learning options according to their original pathway. Table 3 indicates that at the start of the study three-quarters of our participants were engaged in formal learning with just over a third combining this with full-time employment. Put another way, a third of

Table 2 Interviews and participation 2004–2009

Interviews	# of participants	% of original cohort
Jan 2004–Mar 2004	114	
Oct 2004–Jan 2005	103	90
Oct 2006–Mar 2007	88	77
Oct 2008–Jan 2009	78	68

Table 3 Participants' work and learning status at beginning of the study

Work and learning option	Number	Original pathway
Full-time paid work	39	19 soldiers; 20 apprentices
Workplace learning (national qualifications)	25	5 soldiers; 20 apprentices
Workplace learning (informal or in-house qualifications)	14	14 soldiers
Full-time tertiary study	75	70 students; 5 army officers
With part-time paid work	41	36 students; 5 army officers
Without part-time paid work	34	34 tertiary students

participants ($n=39$) were engaged in full-time paid work at the start of the study and all of these were also engaged in formal or informal learning. Table 4 shows that by the fourth and final interviews, three-quarters of our participants were engaged in employment (almost all full-time), up from third at the beginning of the project. While less than a fifth studied full-time at this stage, down from almost two-thirds at the beginning, it is noteworthy that just over half of participants are still engaged in learning. Most of these are working full-time in additional to formal learning (just over a third of all participants).

In the sections that follow, the next one, "Clusters and pathways", we explore participants' general acceptance that their lives, especially their *working* lives, will offer up opportunities for ongoing learning. Most participants experience this positively and many describe seeking out learning opportunities or planning career pathways based on the number, range, and kinds of opportunities available. However, others experience learning opportunities as an unwelcome obligation or an alarming test of their abilities.

Clusters and Pathways: A Mixed Methods Approach to Analysis

Although it was not part of our original design, we developed a mixed methods approach to our analysis that is quite distinct from other youth transition studies

Table 4 Participants' work and learning status at fourth interview

Work and learning option	Number
Full-time paid work	56
Workplace learning (national qualifications)	7
Workplace learning (informal or in-house qualifications)	8
Self-funded learning (formal qualifications)	13
Full-time study	14
With part-time paid work	11
Not working or studying	4
Part-time paid work	4

conducted over a number of years. Our first step was to examine the interviews in-depth. From this, we isolated two major themes—*security* and *exploration*—that were consistently present, regardless of whether the young people were speaking about, for example, influences on their decision making, their feelings about decisions they had made, or things they considered important to succeed. Our separation of these two themes is framed by the current youth transition policies and in-school career education practices which tended to encourage young people to consider ways they could variously “secure” and “explore” future career prospects.

We initially proposed that exploration and security might be mutually exclusive ideas. For example, some participants were searching for the security of a “good job” that they could settle into long-term and others were exploring widely and wanting ongoing opportunities to explore (and to *not* settle down). We also read and reread the interviews as entire narratives (rather than reading coded fragments of interviews), and we repeatedly found examples of young people who had chosen wide and varied pathways in order to keep their options open. In other words, they seemed to see their exploration as a kind of security. Following this observation, it was decided to identify the different security and exploration themes in the interviews. In response, we developed quantitative measures to summarise that qualitative data. These means were secured through a set of “indicators” that allowed us to give a 1–5 rating (from low to high or a little to a lot) for the dimensions of security and exploration in interviews. The indicators were based on the different security and exploration themes we saw emerging from interview data. They were also informed by the initial theoretical framing of the study (i.e. young people’s positioning as both the problem and solution of transition) (Table 5).

Our dimensions or “indicators” were:

1. contingency of family support
2. fear of failure (as motivator) in current pathway
3. strength of relationships between current pathway and career identity
4. commitment to alternative pathway
5. importance of comparison with others
6. plannedness going into current pathway
7. importance of current pathway as an escape from past or potential future
8. thinking about exploration (narrow to wide)
9. importance of financial security
10. satisfaction with current pathway
11. importance of exploration of self/own capacities through current pathway
12. strength of short-term commitment to current pathway

Each of the three researchers in our team worked with a set of interview transcripts from interviews they had themselves conducted, as well as a smaller set of transcripts from interviews that other researchers in the team had conducted. This second, smaller set of transcripts was common to all of us and served as a “moderation” set for comparisons and discussions about the meaning and boundaries of different indicators. We met frequently to moderate our indicator ratings and discuss cases that were more difficult to rate.

Using indicator ratings provided a new level of quantitative analysis, which in turn gave us a framework for further qualitative analysis. Moving back and forth

Table 5 Clusters and characteristics for interviews 1 and 2 (2004–2006)

Cluster	Cluster maxim and characteristics
The hopeful reactors (14% of interviews)	“I’m not going to end up a bum” Few or no school qualifications and pathway options. Looking to escape negative future prospects from (e.g. unemployment, criminal associations) in family and community backgrounds. Rebuilding identities as newly successful learners in non-school settings and seeking jobs with long-term stability and financial security, and opportunities for learning and promotion.
The passion honers (34% of interviews)	“I’m becoming something in a secure career” Enthusiastically pursuing long-standing vocationally-specific interests. Making long-term commitments to careers, which they understand as dynamic processes rather than static entities. Seeking specialisation, development of expertise, and respect from colleagues in their industry.
The confident explorers (29% of interviews)	“I’m building my self for my future” Not necessarily high achievers at school and willing to explore widely and creatively link possibilities. No long-term occupational view but clear sense of purpose about life and enthusiasm for challenge and change. Sense of selves as learners and an ongoing enterprise.
The anxious seekers (24% of interviews)	“I don’t know which way to turn” Apprehensive, restless, and dissatisfied with current pathway so exploring different and disparate options. Suffering information overload and overwhelmed by decisions required of them. Longing to pin down interests and an identifiable career as an anchoring point.

(Adapted from Vaughan et al. 2006)

between data and analysis is a common enough way for researchers to work. However adding another level of back and forth movement—between qualitative and quantitative—added a new and wonderfully useful dimension to our work. We rated individual *interviews* rather than individual *people*, to leave open the possibility that any one individual might have different perspectives at different points in time and that we might capture these changing perspectives in different clusters. As it happened, two-thirds of our interviewees had their first and second interviews in the same cluster—perhaps because their perspectives (as we captured them through the indicators) had changed little between the first and second interviews which were conducted only about 10 months apart.

After rating all the interviews against indicators, we used a cluster analysis to identify which groups of interviews were most alike, according to the ratings they had received. Indicator ratings formed the key statistical data used for clustering and this is shown in the Likert graph in [Appendix One](#), along with a table of the statistical means and standard deviations that were used to form the clusters. We took each interview as a case and sorted them into four groups or clusters according to their rating patterns across the indicators. We used R 2.7.1 (R Development Core Team 2008), calculating the distance matrix with the function `daisy()` in the package `cluster` which produces similarities adapted by Kaufman and Rousseeuw (1990) from Gower’s (1971) original proposal. We used the Ward (1963) clustering method.

The cluster analysis captured differences between interviews and the boundary between any two clusters could be subtle. Therefore, for those interviews that could be described as occupying the outskirts or “edge” of a cluster, a small shift in the ratings on

one or two indicators could bump them into another cluster. This finding underscores one of our central propositions for the project: that young people cannot be placed into mutually exclusive categories according to a finite list of variables or activities.

For the first two interviews, four clusters emerged, each with its own distinctive profile. However, the interviews—as a whole “set” and according to cluster differences—also provide insights into how young people think about learning and work. The following table provides only a very brief summary of these clusters—other publications have discussed these cluster groupings and transition approaches at length (Vaughan and Roberts 2007; Vaughan et al. 2006). The focus of this article is on transition approaches (with particular emphasis on learning and career development) captured in the 2008 *fourth* interview clusters.

There were some overall patterns, along with differences between clusters revealed within this analysis. Most young people understood “career” not as a destination, static entity or structure, but as a process (Wijers and Meijers 1996). Thus, they “produced” their careers, rather than entering them. Most participants felt almost entirely unprepared (particularly by school) to make the decisions required of them. They understood exploration of options not as something that necessarily comes *before* settling down, as it does in typical youth transition policy and school-based career education, but expected to be exploring and trying out different options on an ongoing basis and experienced it as a sort of life mode for learning, work development, and lifestyle. One group of young people experienced the increasing volume and breadth of career options as overwhelming and destabilising. Others understood the world as changing rapidly and placed importance on having back-up plans, even deploying them before undertaking their most desired option—partly as a risk-avoidance strategy and partly to serve as a creative platform for tying together seemingly unrelated pathways or creating hybrid occupations. Overall, nearly all participants indicated that *who* they could be was more important than *what* they could be. They spoke of themselves, not as becoming the job or the person who does the job—plumbers or film directors or client managers—but as becoming people who develop the job in relation to a life: for example, to be an army officer with a family, a highly respected plumber within the industry, a person who can learn anything at any time, or someone who is never stuck or bored in life.

Our original cohort contained almost equal numbers of males and females, an over-representation of Māori (indigenous to New Zealand), and an under-representation of (migrant) Pacific and Asian populations. However, there were no strong gender or ethnicity patterns across clusters. Clusters had only weak pathway-specific patterns. That is, there tended to be representatives from each pathway scattered across all the clusters. Yet, there were no direct-entry university students, and only a few “bridging” university students in the Hopeful Reactors, and the greatest proportions of direct-entry university students were classified in the Confident Explorers and Passion Honers categories. We were unable to determine patterns for social class and socio-economic status as our only participants were the young people themselves who were unable to provide us with accurate information about their parents’ occupations and qualifications, and sometimes even their own qualifications (we were, however, able to deduce much of the latter from their pathway options). Some occupation and socio-economic status patterns emerged by the fourth interview and these are discussed briefly in the following section.

When viewed in clusters, it became clear that young people in different pathways, but in the same cluster, understood their work and education options to be in service of very similar life goals or they made meaning about their experiences in similar ways. Similarly, interviews from young people in the same pathways spread over different clusters highlighted the way that the same work and learning pathways could play very different roles in their lives. Although the clusters provided a useful lens over the data, with which to see the different approaches to transition taken by different groups of young people, it is extremely difficult to sustain in a more traditional longitudinal sense. It was found that some of our initial indicators, such as “contingency of family support” became less useful over time and we needed to add others, such as “extent of acknowledged impact of social network on current pathway decisions” and “drive to succeed”, to capture newly emerging sub-themes of the still-relevant main themes of security and exploration.

We were able to adjust our design, but we acknowledge that doing so in order to fully account for a snapshot in time has meant trading off some of the ability to readily capture change in fixed variables over time. This was judged a necessary trade-off necessary given the deep complexities and methodological problems involved in trying to answer seemingly simple questions about education and employment pathway change over time. By adjusting to best capture the emerging themes of meaning-making in each set of interviews, we have seen that our participants have experienced multifaceted pathways—combinations of different jobs at any one time or a series of short-term jobs that may have seemed, at face value, to be insecure or ill-fated. Indeed some participants have experienced these combinations as insecure. Yet, others have experienced them as building blocks in their occupational area of passion, or as part of a lifestyle design (e.g. prioritising periods of travel or care of family).

We also needed a tight definition of “pathway” for it to be useful in a longitudinal comparison. For example, we needed to decide whether a pathway was education and work *towards* a specified “destination”, such as becoming a psychologist or plumber, or was an outcome in itself, such as “a university pathway”. If a pathway was a *means towards* an occupational destination, there was a need to account for pathways that do not lead to such destinations, such as basic administration courses. If a pathway was equated to *the means itself*, this created problems discerning the patterns in finer pathways details because our participant sample was so small. While tertiary education in New Zealand includes university, technical institutes and industry training, these are quite different in their pedagogy and assessment systems, fee structures, and in the kinds of experiences they offer students. We certainly wanted to distinguish among these forms of tertiary education.

In addition to these issues, our participants’ ways of understanding the pathways disrupted some of the typical hierarchies (e.g. some considered their part-time study, rather than their full-time job, to be their “real” pathway), and these understandings could not be isolated from a myriad of other factors involved in the way they made meaning from their experiences, framed their futures and made “identity investments” (Hollway and Jefferson 2000) in particular choices. We experienced a taste of these sticky issues when trying to rate against our indicator of “pathway change” (see Vaughan et al. 2006) and realised that any serious measurement of pathways would require a complex coding system that could account for participants’

movements and status in-between interviews, as well as at the point of the interview (e.g. participants might generally have stable periods of employment or full-time study but be unemployed or in a short-term, low status/low security job at the moments of their interviews).

Thus, our study has been longitudinal only in the sense of retaining a cohort of participants over a number of years. Rather than take the “case” to be individual participant, we have taken it to be the interview so that we might focus on a close analysis of patterns within the overall cohort and between different clusters at particular points in time.

Findings: Young Adults Approaches to Work and Learning

Our fourth interviews with participants now aged 21–23 years old continued to identify many of the same themes of the previous analysis, though it seemed that the pathways themselves and the modes of engagement with them had become more complex. This finding seems to be partly a consequence of new and different tertiary level learning options and partly due to participants generally having more information about, and more experience of, life beyond school. School was no longer their only education setting or experience. Many participants could see more opportunities opening up in the form of different occupations, a new workplace, or new learning and specialisation opportunities in particular domains. Also, many had experienced a range of different jobs and working conditions over the past 5 years. In fact, the proportion of those making significant changes (e.g. moving from full-time study to full-time work, finding new work in a different industry or setting) increased with every interview—from 17% between interviews 1 and 2, to 21% between interviews 2 and 3, to 43% between interviews 3 and 4. However, it should be noted that high rate of change at the fourth interview was at least in part due to a number of interviewees who had recently completed a 3-year degree or apprenticeship and were now finding work, taking “time out” and travelling, or changing to a different job or situation.

There were some commonalities across all the interviews that were previously only discernable in some interviews. For example, by the fourth interview the vast majority of participants had social networks distinct from immediate family, were planning their lives more carefully, and were highly conscious of money. In fact, unlike in previous interviews, all participants were concerned about money; for all of them, it was a conscious part of their career decision-making at some level, though its influence and impact still varied.

Very few participants now lacked a fairly high level of self-awareness that allowed them to reflect upon the ways they were developing (or exploring) themselves and their roles in life. Nor did they tend to “fall into” jobs or courses without any thought as they previously had. Although there were certainly still many serendipitous events and new and unexpected possibilities appearing, the way interviewees described engaging with these had changed. They reported now nearly always described giving consideration either prior to, or as they took up (or declined) different opportunities. Previously a sizeable proportion of our participants described “going with the flow” and wanting to “just see what happens”. Several years later, almost none of the participants were making these kinds of references. It is likely

that the reasons for this change are partly developmental but also partly contextual, as information becomes more widely available and accessible, and as societal expectations continue to be about considering all possibilities and maximising choices rather than settling for the first or obvious option.

Most participants were interested in the possibility of study leave from paid employment, especially to travel, and particularly valued the flexibility of working conditions and hours. They preferred working in teams to working alone, and a job that allowed them to be “creative” in the sense of being “prod-users”, rather than consumers, of knowledge (Hearn 2005 cited in McWilliam and Haukka 2008). While they were keen for promotion and further learning opportunities, the participants were less certain about wanting or needing to remain in one position for more than 5 years.

We asked participants about their learning and what they thought about the idea of lifelong learning. Almost every one felt that life was not life without ongoing learning. They readily described instances of learning and self-development from everyday situations, and also recognised that learning was a critical in working life. They understood learning to include formal, informal, and non-formal settings and knowledge, although they rarely mentioned combining them.

Cluster Differences in Learning and Work Orientations

The cluster analysis of the fourth interview data showed clusters that were less distinct than before (except for one). Yet, there were interesting differences between different clusters in terms of understandings of, and approaches to, learning opportunities in relation to work.

The Opportunity Initiators were notable for their short- and long-term commitment to their current learning and/or work. They were open to change, willing to take risks, and especially keen to take up new learning opportunities. They were also confident about their own learning capabilities and being able to develop new connections between different aspects of their jobs, careers, and lives. Nearly all of the interviewees were taking, or soon to take, courses being offered through their employer. Many had reorganised their work and/or lives as a result of unexpected events and experiences that had prompted them to re-evaluated their priorities. They tended to frame setbacks in terms of opportunities to learn and looked for the ‘silver linings in clouds’. Half of the respondents had professional occupations and a third were employed in technical or trades-related occupations. They were most like the previous Confident Explorers. Indeed, half of them had previously appeared in that cluster. Typical comments focused on learning through challenge and learning both procedural and conceptual knowledge:

I’d like to still be learning something new at 60 otherwise then what’s the point of sticking around really?...I left [previous job] because I needed to get back into something that’s going to teach me, challenge me everyday, and my last job, it wasn’t. At [previous job], I got to that stage where I knew it like the back of my hand, and so moving was a good thing, and then coming here is even better—it’s more challenges, more opportunities as well, training and all that type of stuff (case manager)

[I'm] just really learning, learning how to, learning inside out, and learning the mechanics of my job...and also how to get around the paper war and how to react to people and interact with them (army officer).

Like the Opportunity Initiators, *the Risk Managers* felt very committed to, and satisfied with their current pathways, and identified with them as careers. However, unlike the Opportunity Initiators' enthusiasm for the work or career itself, the Risk Managers were driven by external concerns and demands such as financial need or avoidance of other less desirable options and outcomes. Some framed staying in particular work in terms of financial incentives that were too good to turn down. Others had strong financial imperatives due to debt or family responsibilities. The Risk Managers were interested in further learning but for the specific purpose of promotion and salary increases, or following up possibilities that might later lead to these outcomes. They generally saw learning as formal and leading to qualifications and as a way to gain entry to a particular job. Less than a third of participants had either professional or technical and trades-related occupations. Almost half were in clerical occupations. Typical comments focused on the outcomes or external requirements:

I'm going to sit a few papers while I'm in the call centre so I can have it on paper, my qualifications and my skills...and then from there I want to kind of go to a certain level, well I want to stay the top of [my company] because it's a really big company...I really want to reach my potential within the company, not just to be on top but also to learn and I want to learn all there is to learn about our job...I do really want to further myself and then take myself somewhere else to another area, something different (call centre operator).

I'm not sure [about the electrician course], it all depends on how this goes and when it's required, or if it's required at all. I believe it will be required if I stay in this field for a certain period of time but I'm not sure when or what time frame it will be (army technician).

The Fine-Tuners were careful planners and had many ideas about their careers and lives and futures. However, they tended to be interested in tertiary learning and work other than their current situation and gave the impression of "casting about". The casting about perspective seemed to fall into two broad categories: those who enjoyed their work but wanted to focus on a particular area or dimension of it; and those who wanted a complete change in work where they might utilise existing skills and knowledge in quite a different way or in a totally different domain. Just over a third had either professional occupations or technical and trades-related occupations. Typical comments were about what other work and interests they might gain access to:

Yeah finishing my degree I definitely think has because it just puts you that little bit above everyone else who doesn't have one when you're applying for a job even if it's a basic job, but also just the opportunities...it's opened more doors towards specialists subjects which is good (bank officer)

The Discontented Triallists were the most distinct of the four clusters. Unlike interviewees in the other clusters, they had been unhappy with their lives generally since the previous interview, they disliked their current learning and work options, and had no sense of career identification with them and no short- or long-term

commitment to them. Over a third of these informants were leaving their current jobs in search of higher salaries elsewhere, though not everyone could specify what jobs they might move to. Those who were staying in their current positions tended to see it as a way to avoid another undesirable possibility in their lives. Like the Risk Managers, they were driven by high financial need with most indicating their career or work choices had been strongly influenced by financial factors.

This cluster was notable for interviewees' objection to institutional learning settings. They also had lacked confidence in their own learning ability, highlighting how crucial learner confidence is as an inhibitor or facilitator of learning (Amundson and Morley 2002). For the Discontented Triallists, lifelong learning seemed almost like a life sentence. None of these informants had professional occupations, though two were specialist managers. Almost half were clerical workers; just over a third were employed in technical or trades-related occupations. Typical comments revealed an attitude to learning as a process far removed from themselves:

I think you should be learning all the time but as long as it leaves you some time to be yourself and have some chill out time, like you wouldn't want to always just be learning...I've always been a strong believer that you should always learn but it doesn't mean that you have to go to Uni or go to school to learn there's other ways of learning (IT test analyst).

There should be options of how you learn, not just stuck in a classroom environment for 2 days to learn a computer-based training system that's not even live and has no relevance to your actual job...I mean the cancel button on a computer screen, it's pretty friggin self-explanatory (case manager).

I kind of left school because I didn't really like learning (plumber).

These accounts provide a range of insights into how these informants' viewed themselves as learner-workers.

Reconceptualising Learner-Workers as Learning-Workers

Overall, the interviewees indicate a propensity for learning, participation, challenge and change. To older people or people more used to traditional learner-to-earner models, our interviewees' orientation to lifelong learning and change may appear to be characterised by a lack of commitment because it suggests a lot of worker mobility or effort in inconsistent directions. Five years after leaving school, our interviewees continue to change work and education configurations and consider different work and lifestyles, though as Mills (2004) argues, this could be about coping with insecure employment conditions as much as a need for flexibility.

Although there is evidence that young people expect to be working in many different workplaces and across different industries, it is important to note here that most of our interviewees wanted to be a respected and contributing employee and feel that they belonged in a single workplace—even if that workplace might not be “for life”. Most wanted to work in teams, and were eager exercise a sense of self in relation to their work. These demands, or desires, were very much focused around

continuous learning—not necessarily to reach an endpoint in knowledge but to experience and meet challenge, and to literally *practice* their work. This preference is compatible with the central role of learning in knowledge societies, and within them, the key role of workplaces—where most of our interviewees are engaged. These young adult identities seem not so much novice or learner-worker identities as *learning-worker* identities.

Of course the clusters also highlight that access to participation in formal learning is differential, as other research has shown. The Discontented Triallists are less likely to realise opportunities through what Billett (2001b) describes as the dynamic interplay between a workplace's readiness to "afford" learning opportunities and the learner's uptake readiness and mode of engagement. The Discontented Triallists tended to work in non-professional and lower skilled occupations and had fewer qualifications, and qualifications at a lower level, than other clusters (only two of the 16 interviewees were engaged in education. Both worked full-time and studied part-time. One learned with workplace support and the other through distance education in her own time). They felt unconfident about learning and saw it as something that happened in the sorts of formal contexts that were ill-suited to their needs.

The experiences of the Discontented Triallists look similar to those of people who are least likely to have access to training: employees in weak market positions or occupying lower positions within the organisational hierarchy (Fuller et al. 2007; Mallon et al. 2005), or on the losing end contestable opportunities between groups such as newcomers and old-timers, full-time and part-time workers, and teams with different roles (Billett 2001a). Previous experiences of learning or negative "learning careers" (Bloomer and Hodgkinson 2000) suggest that interviewees in the other clusters, in particular the Opportunity Initiators, are more likely to "win" that sort of contest.

Theoretical Implications: The Lifelong Learning Paradigm

In theory, the emergence of knowledge societies and more learning-intensive workplaces may offer a way around some of these limitations (Fuller et al. 2007). Most of our interviewees talked about lifelong learning as if it were almost as ordinary as breathing. This suggests an alignment with the ubiquitous policy idea that all workers will be highly skilled and that education will acknowledge a wider range of sources, especially informal ones, for the development of skills and dispositions. As Bjørnåvold (2001, p. 209) has argued,

"...a lifelong learning system has to face the challenge of linking a variety of formal as well as non-formal learning areas together...to meet the individual's need for continuous and varied renewal of knowledge and the enterprise's need for a broad array of knowledge and competences—a sort of knowledge reservoir to face the unexpected."

However, some authors have questioned the use of lifelong learning as a rhetorical device (Edwards and Nicholls 2001) that creates a new balance of responsibilities between individuals, employers, and state (Field 2000). International critiques of lifelong learning policies point to lifelong learning's shift away from an

association with democratic participation and human potential to its integration into an employability discourse (Evans 2006) and reconfiguration as a narrow skills agenda (Appleby and Marie 2006). Others authors use Foucault's idea of governing at a distance through a "tricky combination in the same political structures of individualisation techniques and totalisation procedures" (Foucault 1982, p. 213) and build on Rose's work (1993; 1999) to show how a particular conception of lifelong learning is mobilised to manage the "educable adult subject" (Fejes 2006), making the learner a stakeholder in the drive for economic growth (Lynch 2008).

In New Zealand, the imperative for people to continue learning, and in ways that bridge the worlds of education and business, can certainly be seen in this more critical light. An explicit, individualised employability discourse first appeared through the Growth Innovation Framework, which formally linked the fostering of a culture of innovation to investment in education (The Office of the Prime Minister 2002). The Framework focused on developing improved pathways between school, work, and further study/training and "high-performance workplace" models. In high-performance workplaces, employees would work in autonomous or semi-autonomous teams, use "soft skills", have a voice in the organisation, and not only have the skills to perform but—importantly—be *motivated* to do so (Hiebert and Borgen 2002). Hence when the Organisation for Economic Co-operation and Development reported the strengths and conditions of New Zealand's innovation "system", it focused on the skills, capacities, and dispositions of population in relation to physical resources (2007, p. 2). Similarly, the New Zealand Treasury identified the development of higher skills, opportunities to re-skill, and "soft skills" as critical: "attitudes and values matter as much as knowledge and technical skill" (New Zealand Treasury 2008).

Policy Implications: Lifelong Learning for Individual, Work, and Career

A policy emphasis on attitude, as well as skill level and knowledge-worker orientation, and the individual's own response to calls for greater productivity is not far from the conception of the youth transition landscape that we began *Pathways and Prospects* with: where young people are positioned as both the problem and solution of transition, held responsible for making the "right" choices throughout, and after leaving, school. It is not surprisingly then that there are moves to try and equip young people for a modern life of learning through isolating the important dispositions required (Carr and Claxton 2002; Deakin Crick et al. 2004), just as there are moves to teach young people *how* to make the kinds of transition and career-related decisions that they will need to continue making throughout their lives.

However, there is also some potential for disruption of the push to continue obtaining qualifications in the name of lifelong learning. While qualifications were important to our participants, particularly those who had few or none, there was also a recognition that qualifications are no longer the culmination of learning but passports for entry into a community of practitioners (e.g. builders, electricians, hairdressers) who will informally build and shape their knowledge and skills *throughout* their working lives (Vaughan and Cameron 2009). Indeed, other Australasian research shows that employees value workplace learning as a chance

to reach more of their potential (unrealised through school) and increase participation at work and that this is at least, if not more, important than the qualifications themselves (Bennett et al. 2000; Moses 2009). Certainly many of our interviewees were citing examples of learning from their lives that exemplified “the knowledge and understanding needed to be effective in doing work in particular roles in particular contexts, that is, a ‘learned worker’ (Portwood) engaging in a curriculum driven by the exigencies of work” (Costley and Armsby 2007, p. 26). In other words, learning and work were not necessarily very far apart in interviewees’ minds and did not necessarily involve privileging qualifications over experience.

The outlooks of the *Pathways and Prospects* young adults also suggest that lifelong learning and lifelong career might not be so incompatible after all. A compatibility requires a broad conception of career-as-life (now commonplace in career theory anyway) and an understanding that workplaces, occupations, and people’s relationship with their occupations, are constantly changing. Workplaces have the potential to meet government priorities in securing secure skills and maintaining workplace competence *and* developing dispositions for occupational practice—throughout life (Billett 2008). Given this, it is possible that the kind of change and ongoing challenge sought by our interviewees could occur within the same workplaces or industries, rather than across them.

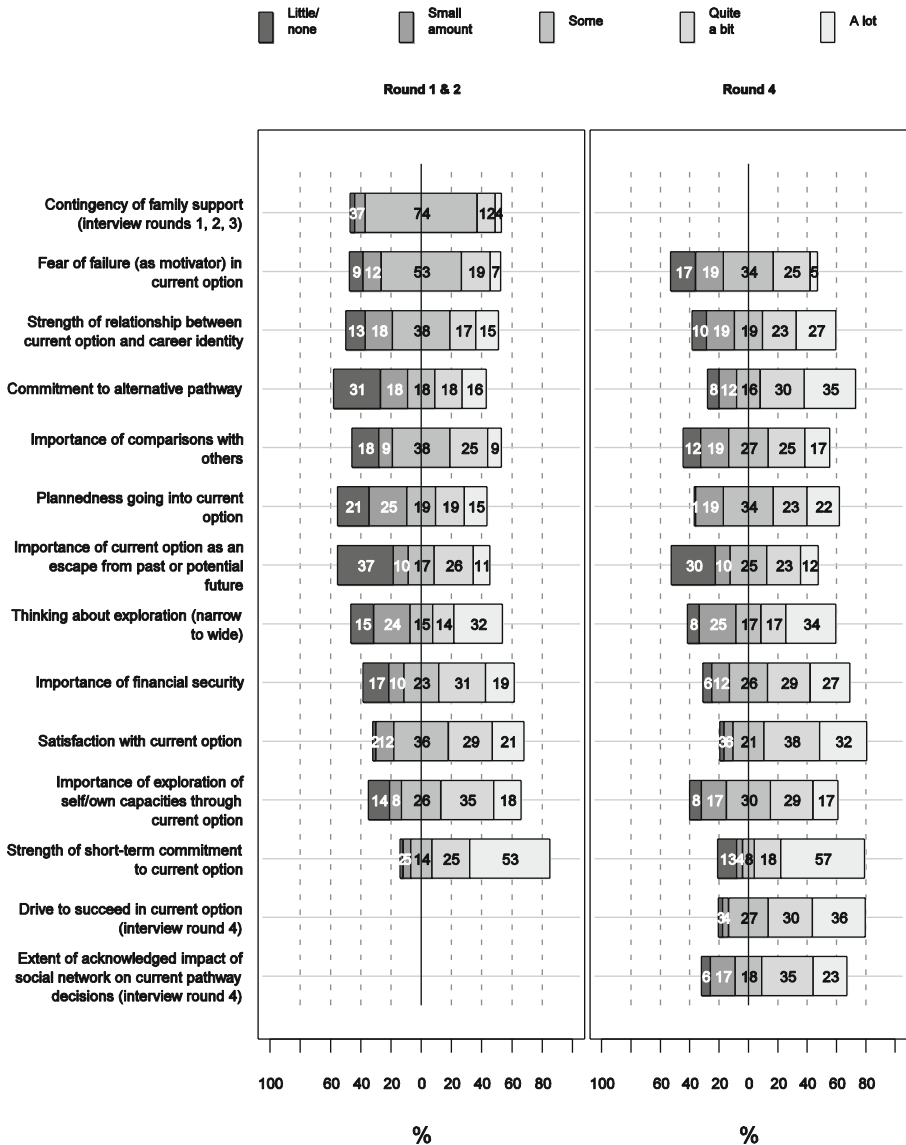
Analysis of the fourth set of interviews in *Pathways and Prospects*, and their relationship to previous narratives, is still a work-in-progress. The young adults point to the possibility of workplaces offering an environment for the deployment of a *learning-worker*—quite different from understanding young people as novice or *learner-workers* trying only to become skilled or *learned-workers*. However the analysis so far also suggests some interesting reconceptualisations of the “dialectical relationship” between people and organisations—and not only their workplace organisations, but also their communities and their social or leisure organisations (Bryans and Smith 2000). Part of reconceptualising these relationships will necessarily involve recognising the ways in which the structural constraints around pathways and pathway choices are constituted in terms of individual choices to the extent that young people’s/young adult’s “silence about the structural side of the (structure-agency) dynamic” does *not* mean it is unimportant (Brannen and Nilsen 2005, p. 418, emphasis added). On the contrary, these “silent” structural issues are a significant part of what makes it possible to become *learning-workers*, which our participants variously highlight as both criteria for self-fulfilment and a burden.

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Appendix 1: Statistical Key Data for Basis of Cluster Analyses

The following Likert shows the proportion of interviews given different ratings against the indicators. “Contingency of family support” was used only for interview

rounds 1, 2, and 3. “Extent of acknowledged impact of social network on current pathway decisions” and “drive to succeed in current pathway” were developed later and used for interview 4.



The following table shows statistical means and standard deviations (in brackets) for each indicator used at each round of interviews. These form the basis of the Likert (above) and our clustering of interviews with ratings (means) that are most similar and most dissimilar.

Table 6 Statistical means and standard deviations used for interviews

Indicators for interview rounds 1 & 2	Hopeful reactors	Confident explorers	Passion honers	Anxious seekers	Overall
Plannedness into current pathway	1.7(1.1)	2.9(1.2)	3.5(1.3)	2.4(1.1)	2.8(1.4)
Strength of short-term commitment to current pathway	4.2(0.9)	4.6(0.5)	4.5(0.9)	3.4(1.2)	4.2(1.0)
Strength of relationship between pathway and career identity	3.0(1.3)	3.0(0.8)	3.7(1.1)	2.0(1.0)	3.0(1.2)
Contingency of family support	3.0(0.7)	2.9(0.4)	3.1(0.6)	3.1(1.0)	3.1(0.7)
Importance of pathway as escape (past or potential future)	3.9(0.9)	2.7(1.3)	1.8(1.2)	3.0(1.6)	2.6(1.5)
Fear of failure (as motivator)	3.5(0.7)	2.8(0.9)	2.8(0.8)	3.4(1.1)	3.0(1.0)
Importance of financial security	3.5(1.4)	2.9(1.5)	2.9(1.1)	4.1(1.0)	3.3(1.3)
Satisfaction with current pathway	2.4(1.0)	2.3(1.0)	2.2(0.9)	3.1(1.0)	2.5(1.0)
Importance of exploration of self	3.3(1.2)	4.0(0.8)	3.0(1.3)	3.0(1.3)	3.3(1.3)
Importance of comparison with others	2.8(1.2)	3.3(0.9)	2.5(1.2)	3.4(1.4)	3.0(1.2)
Thinking about exploration (narrow to wide)	1.9(0.9)	4.3(0.8)	1.9(0.9)	4.5(0.8)	3.2(1.5)
Commitment to alternative pathway	1.8(0.9)	3.5(1.1)	1.4(0.7)	4.1(0.8)	2.7(1.5)
Indicators for interview round 4	Opportunity initiators	Risk managers	Fine-tuners	Discontented triallists	Overall
Plannedness into current pathway	3.3(1.1)	3.2(1.2)	3.8(1.1)	3.4(0.8)	3.5(1.1)
Strength of short-term commitment to current pathway	4.2(1.3)	4.9(0.3)	4.6(0.6)	1.9(1.3)	4.0(1.4)
Strength of relationship between pathway and career identity	4.1(1.0)	4.0(0.8)	3.5(1.3)	1.8(0.8)	3.4(1.3)
Extent of acknowledged impact of social network on current pathway decisions	3.2(1.4)	3.9(0.9)	3.5(1.2)	3.4(1.3)	3.5(1.2)
Importance of pathway as escape (past or potential future)	1.9(1.1)	4.0(1.0)	2.2(1.3)	3.5(1.0)	2.8(1.4)
Fear of failure (as motivator)	1.9(1.0)	3.5(0.6)	2.9(1.3)	3.0(0.9)	2.8(1.1)
Drive to succeed	4.1(0.8)	4.8(0.4)	4.0(0.8)	2.9(1.1)	3.9(1.0)
Importance of financial security	3.2(1.1)	4.1(0.9)	3.2(1.4)	4.2(0.8)	3.6(1.2)
Satisfaction with current pathway	1.6(0.7)	2.0(1.2)	1.8(0.7)	3.2(0.9)	2.1(1.0)
Importance of exploration of self	3.4(0.9)	4.2(0.9)	2.9(1.3)	3.0(1.0)	3.3(1.2)
Importance of comparison with others	2.4(0.8)	4.3(0.9)	2.8(1.2)	3.4(1.3)	3.2(1.3)
Thinking about exploration (narrow to wide)	1.7(0.6)	3.3(1.1)	4.0(1.0)	4.6(0.9)	3.4(1.4)
Commitment to alternative pathway	2.2(1.1)	3.6(1.1)	4.3(0.8)	4.6(0.6)	3.7(1.3)

References

- Amundson, N., & Morley, J. (2002). Workplace wellness and worker well-being. In B. Hiebert & W. Borgen (Eds.), *Technical and vocational education and training in the 21st Century: New roles and challenges for guidance and counselling* (pp. 12–13). Paris: the United Nations Educational, Scientific and Cultural Organization.

- Appleby, Y., & Marie, B. A. (2006). The new skills agenda: Increased lifelong learning or new sites of inequality? *British Educational Research Journal*, 32(5), 703–717.
- Arnett, J. J. (2006). Emerging adulthood in europe: A response to Bynner. *Journal of Youth Studies*, 9(1), 111–123.
- Arthur, M. B., Inkson, K., & Pringle, J. K. (1999). *The new careers: Individual action and economic change*. London: Sage Publications.
- Ball, S. J., Maguire, M., & Macrae, S. (2000). *Choice, pathways and transitions post-16: New youth, new economies in the global city*. London: RoutledgeFalmer.
- Bennett, N., Dunne, E., & Carré, C. (2000). *Skills development in higher education and employment*. Buckingham: SRHE and Open University Press.
- Billett, S. (2001a). Participation and continuity at work: A critique of current workplace learning discourses. *Context, Power and perspective*. Joint Network/SKOPE/TLRP International workshop 8–10th Nov 2001, University College of Northampton.
- Billett, S. (2001b). Learning through work: Workplace affordances and individual engagement. *Journal of Workplace Learning*, 13(5), 209–214.
- Billett, S. (2008). Emerging perspectives on workplace learning. In S. Billett, C. Harteis, & A. Etelapelto (Eds.), *Emerging perspectives on workplace learning*. Rotterdam: Sense Publishers.
- Bjørnåvold, J. (2001). Making learning visible: Identification, assessment and recognition of non-formal learning. *European Journal of Vocational Training*, 22, 24–32.
- Bloomer, M., & Hodkinson, P. (2000). Learning careers: Continuity and change in young people's dispositions to learning. *British Educational Research Journal*, 26(5), 583–587.
- Brannen, J., & Nilsen, A. (2005). Individualisation, choice and structure: A discussion of current trends in sociological analysis. *The Sociological Review*, 53(3), 412–428.
- Bryans, P., & Smith, R. (2000). Beyond training: Reconceptualising learning at work. *Journal of Workplace Learning*, 12(6), 228–235.
- Carr, M., & Claxton, G. L. (2002). Tracking the development of learning dispositions. *Assessment in Education*, 9, 9–37.
- Cheng, K.-M. (2007). Learning society: The East Asian perspective. In M. Kuhn (Ed.), *New society models for a new millennium: The learning society in Europe and beyond*. New York: Peter Lang.
- Costley, C., & Armsby, P. (2007). Work-based learning assessed as a field or a mode of study. *Assessment and Evaluation in Higher Education*, 32(1), 21–33.
- Deakin Crick, R., Broadfoot, P., & Claxton, G. (2004). Developing an effective lifelong learning inventory: The ELLI project. *Assessment in Education*, 11(3), 247–272.
- Education Review Office. (2009). *Creating pathways and building lives. Overall evaluation of the initiative 2006–2008*. Wellington: Education Review Office.
- Edwards, R., & Nicholls, K. (2001). Researching the rhetoric of lifelong learning. *Journal of Education Policy*, 16(2), 103–112.
- Evans, K. (2006). The rainbow concept of lifelong learning: A thematic review. *British Journal of Educational Research*, 32(3), 527–534.
- Evans, K., Rudd, P., Behrens, M., Kaluza, J., & Woolley, C. (2003). *Taking control: Young adults talk about the future in education, training and work*. Brighton: The National Youth Agency.
- Fejes, A. (2006). The planetspeak discourse of lifelong learning in Sweden: What is an educable adult? *Journal of Education Policy*, 21(6), 697–716.
- Field, J. (2000). Why lifelong learning promises so much but delivers so little. *Educational Management and Administration*, 28(3), 249–261.
- Fine, M. (1994). Working the hyphens: Reinventing self and other in qualitative research. In N. K. Denzin (Ed.), *The handbook of qualitative research* (pp. 70–82). New York: Sage.
- Foucault, M. (1982). Afterword: The subject and power. In H. L. Dreyfus & P. Rabinow (Eds.), *Michel Foucault: Beyond structuralism and hermeneutics* (pp. 12–13). Sussex: Harvester Press.
- Fuller, A., Unwin, L., Felstead, A., Jewson, N., & Kakavelakis, K. (2007). Creating and using knowledge: An analysis of the differentiated nature of workplace learning environments. *British Educational Research Journal*, 33(5), 743–759.
- Furlong, A., Cartmel, F., Biggart, A., Sweeting, H., & West, P. (2003). *Youth Transitions: Patterns of Vulnerability and Processes of Social Inclusion* (Enterprise and Lifelong Learning series). Edinburgh: Scottish Executive Social Research.
- Gower, J. C. (1971). A general coefficient of similarity and some of its properties. *Biometrics*, 27, 857–871.
- Hall, D. T., & Mirvis, P. H. (1996). The new protean career: Psychological success and the path with a heart. In D. T. Hall and Associates (Ed.), *The career is dead—long live the career: A relational approach to careers* (pp. 15–45). San Francisco: Jossey-Bass.

- Hearn, G. (2005). The shift to value ecology thinking and its relevance to the creative industries, paper presented at the Open Content Licensing (OCL): Cultivating the Creative Commons Conference, Queensland University of Technology, Brisbane, 18–19 January.
- Hiebert, B., & Borgen, W. (2002). *Technical and vocational education and training in the 21st century: New Roles and challenges for guidance and counselling*. Paris: UNESCO.
- Higgins, J. (2003). *Labour Market Programmes for Young People. A Review* (Youth Transitions Report Series 2003). Wellington: Ministry of Social Development.
- Hollway, W., & Jefferson, T. (2000). *Doing qualitative research differently: Free association, narrative and the interview method*. London: Sage Publications.
- Kaufman, L., & Rousseeuw, P. J. (1990). *Finding groups in data: An introduction to cluster analysis*. New York: Wiley.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. California: Sage Publications, Inc.
- Lynch, H. (2008). Lifelong learning, policy and desire. *British Journal of Sociology of Education*, 29(6), 677–689.
- Mallon, M., Bryson, J., Pajo, K., & Ward, R. (2005, 14–17 June). *Learning at work, organisational opportunities and individual engagement: A case study of a New Zealand wine company*. Paper presented at the 8th conference on International Human Resource Management, Cairns, Australia.
- McWilliam, E., & Haukka, S. (2008). Educating the creative workforce: New directions for twenty-first century schooling. *British Educational Research Journal*, 34(5), 651–666.
- Mills, M. (2004). Demand for flexibility of generation of insecurity? The individualisation of risk, irregular work shifts and Canadian Youth. *Journal of Youth Studies*, 7(2), 115–139.
- Moses, K. (2009). *What are the key factors affecting learner motivation to complete qualifications through workplace learning?* Paper presented at the 6th Researching Work and Learning Conference, Roskilde University.
- New Zealand Treasury. (2008). *Working smarter: Driving productivity growth through skills* (New Zealand Productivity Paper 08/06). Wellington: New Zealand Government.
- R Development Core Team (2008). R: A Language and Environment for Statistical Computing. Vienna: R Foundation for Statistical Computing. <http://www.R-project.org/>.
- Raffé, D. (2001, 15–16 October). *What are pathways? Concepts and evidence from cross-national research*. Paper presented at the Understanding Youth Pathways. Research Conference 2001, Melbourne.
- Raffé, D. (2003). Pathways linking education and work: A review of concepts, research, and policy debates. *Journal of Youth Studies*, 6(1), 3–21.
- Rose, N. (1993). Government, authority, and expertise in advanced liberalism. *Economy and Society*, 22(3 August), 283–299.
- Rose, N. (1999). *Powers of freedom: Reframing political thought*. Cambridge: The Press Syndicate of the University of Cambridge, Cambridge University Press.
- Santiago, P., Tremblay, K., Basri, E., & Arnal, E. (2008). *Tertiary education for the knowledge society. Volume 1. Special features: Governance, funding, quality*. Paris: Organisational for Economic Cooperation and Development.
- te Riele, K. (2004). Youth transition in Australia: Challenging assumptions of linearity and choice. *Journal of Youth Studies*, 7(3), 243–257.
- The Office of the Prime Minister. (2002). *Growing an innovative New Zealand*. Wellington: The Office of the Prime Minister.
- Vaughan, K. (2005). The pathways framework meets consumer culture: Young people, careers, and commitment. *Journal of Youth Studies*, 8(2, June), 173–186.
- Vaughan, K. (2008). A tale of two hyphens: Working the policy-research and researcher-researched hyphens in a longitudinal youth transition project. *International Journal of Social Research Methodology*, 11(3), 215–227.
- Vaughan, K., & Cameron, M. (2009). *Assessment of learning in the workplace: A background paper*. Wellington: Industry Training Federation.
- Vaughan, K., & Gardiner, B. (2007). *Careers education in New Zealand schools*. Wellington: Ministry of Education.
- Vaughan, K., & Roberts, J. (2007). Developing a “Productive” account of young people’s transition perspectives. *Journal of Education and Work*, 20(2), 91–105.
- Vaughan, K., Roberts, J., & Gardiner, B. (2006). *Young people producing careers and identities. The first report from the pathways and prospects project*. Wellington: New Zealand Council for Educational Research.

- Ward, J. H. (1963). Hierarchical grouping to optimize and objective function. *Journal of the American Statistical Association.*, 58, 236–244.
- Watts, A. G. (2001). Career guidance and social exclusion: A cautionary tale. *British Journal of Guidance and Counselling.* 29(2), 158–176.
- Wijers, G., & Meijers, F. (1996). Career guidance in the knowledge society. *British Journal of Guidance and Counselling.* 24(2), 185–198.
- Wilford, J. N. (1981). *The mapmakers*. New York: Knopf.
- Wilson, A., & Young, L. (1998). *Implementation of the career information and guidance policy in schools: 1998 follow up study* (Report to the Ministry of Education). Dunedin: University of Otago Consulting Group.

Karen Vaughan is a Senior Researcher at the New Zealand Council for Educational Research, where she leads the research programmes on *Learning at Work* and *Youth Transition and Career Development*. Her work has influenced a number of high-profile policy initiatives in New Zealand and she provides advice to government agencies and tertiary and industry bodies. She has been published locally and internationally on workplace learning in knowledge societies, youth transition and careers development, qualitative and quantitative-qualitative mixed methodologies, alternative education, and training strategies for small to medium-sized enterprises (SMEs). She is a member of the Ministry of Research, Science and Technology's *He Waka Tāngata* social science leadership group and of the New Zealand team to the International Symposium on Career Development and Public Policy.