

Crazy paving? Learning pathways between and within VET and higher education

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Abstract

Promotion by governments and institutions of pathways and seamlessness over the past decade may be perceived as both positive and problematic. Seamlessness can provide considerable choice for young people and yet at the same time can readily lead to uncertainty and indecision. A number of studies have drawn attention to the phenomenon of indirect transfer where movement of tertiary students is not linear but instead involves several moves within and between institutions and sectors.

This paper examines what some of these pathways look like, explores patterns in such movement and proposes a typology of learning pathways. The research involved in-depth interviews held with 49 students in South Australia who had experienced both VET and higher education. Such research can help us to understand more fully the experiences in, reasons for and consequences of moving within and between various pathways. It might also help policy-makers and institutional planners with insights into how best to position relationships between sectors and to implement policies and services that help learners navigate through education systems.

Background and literature

Promotion by governments and institutions of pathways and seamlessness over the past decade (e.g. ANTA 1998, DEST 2002, ANTA 2003, House of Representatives 2004) may be perceived as both positive and problematic. On the one hand, seamlessness can provide considerable choice for young people as they grapple with the challenges of learning opportunities and finding work. On the other, it can readily lead to a climate of uncertainty and indecision, where young people struggle to make meaning of the seemingly endless array of possibilities before them, wrestle with decisions about the most appropriate ways ahead for them personally, and discover at some later time that less than optimal selections can be both financially draining and time inefficient. Policy that promotes unlimited choice has tremendous potential, yet necessarily makes assumptions about (a) individuals having the requisite ‘wherewithal’ to benefit from a range of alternatives, and (b) the usefulness and timeliness of career services and arrangements.

Teese and Watson (2001, p.7) have claimed that “relatively little is known about the educational and employment pathways of students moving between the sectors”, despite the importance for policy-makers and institutional administrators of such data in order to understand changes in the demand for education and training and how best to meet student needs. Their report illustrates, however, the difficulties in mapping such movement only from existing data collections, and many writers have also drawn attention to the inadequacies of national data (Teese & Polesel 1999, Pitt 2001, Ramsay, Tranter, Kain & Sumner 1997, Moodie 2003, Karmel & Nguyen 2003, Harris, Sumner & Rainey 2005).

Aside from data quality issues, a number of studies have drawn attention to the phenomenon of indirect transfer where movement of tertiary students is not in a

straight line but instead involves several moves within and between institutions and sectors. Golding's work was instrumental in highlighting the need for two-way models of movement (Golding 1999). Moodie has since highlighted several institutional studies drawing attention to this type of movement in the USA, including that by de los Santos and Wright (2002) which refers to the concept of 'swirling' and that by Maxwell and colleagues (2002) which refers to 'the community college shuffle' (both cited in Moodie 2004, pp.42-3). Karmel and Nguyen (2003) suggested that these kinds of movement may also be happening in Australia, while a study by Harris, Sumner and Rainey (2005) found a high level of both intra- and inter-sectoral movement and illuminated the complexity in the phenomenon of student pathways.

Significantly, several high-level national reports in this area continue to acknowledge there are concerns and challenges with the notion of seamlessness. DEST's report, *Varieties of Learning* (2002, p.3), concludes that the way forward is to strengthen inter-sectoral links, that there be "clear and easy pathways between VET and higher education" and that "the challenge is to develop in Australia a national system that underpins educational choice". The national strategy for vocational education and training 2004-2010, *Shaping our future*, recognises that, although pathways between education and training sectors have improved, barriers still exist, particularly between vocational education and training and universities (ANTA 2003). Moreover, the House of Representatives' Standing Committee on Education and Training (2004) recently cites the following as the three main barriers to improving pathways: funding, inadequate credit recognition and transfer arrangements, and administrative issues. And Gardener's (2002) Queensland review of pathways articulation concludes that:

There is a lack of transparency and clarity in arrangements for articulation and credit transfer from VET to higher education; and no clear understandings of how incomplete university qualifications will be recognised in VET. Differences in the approaches of the ... education sectors make transition between them – with effective recognition of the prior knowledge and skills gained – complex, opaque and inconsistent. All these barriers make transitions for young people more difficult and time consuming. (p.12)

Other research suggests that it is not simply a matter of getting credit transfer and administrative processes worked out. McMillen, Rothman and Wernert (2005), for example, in their recent study of the LSAY data, concluded that "interests play a major role" (p.32). They found their data emphasised the importance of preferences and interests, such as wanting to get a job or new apprenticeship, the course turning out not to be what they wanted or losing interest as common factors for withdrawal or deferral, and that the high proportions indicating these reasons "suggest a need for students to have better access to course and career guidance prior to entry to tertiary study" (p.36). Furthermore, British work (Bloomer & Hodkinson, 2000a & b) on the notion of "learning careers" of young people aged 15 to 19 years illustrates that they are erratic rather than linear or entirely predictable, rarely the products of rationally determined choice, inextricably linked with other life experiences, and tightly bound up with the transforming personal identities of people at this age.

So questions remain. What do these pathways look like? How does each individual make meaning of their trajectories (pathways) in their 'subjective career' beginnings (Walton & Mallon 2004)? Can any patterns be perceived that might help us to understand more thoroughly the experiences in, reasons for and consequences of moving within and between these educational sectors? This paper examines some of these pathways taken by participants with experience in both the VET and university sectors, explores patterns in their movement and proposes a typology of learning pathways.

Research process

The sample was drawn from those who had returned questionnaires for an earlier study on movement between the tertiary sectors (Harris et al. 2005) and who were willing to be followed up with an in-depth interview. They had been commencers in 2003 either at all eight South Australian TAFE institutes and had had prior higher education experience, or at all three universities and had had prior VET experience. The interviews were audiotaped and transcribed, and the text entered into NUD.ist software. Data were coded, analysed and interrogated for patterns.

Of the total number of 144 with contact details and under 35 years of age (124 higher education students, 40 VET students), 49 interviews were completed (38 higher education students, 11 VET students), making a 34% response rate. Fifteen were under 25 years, 16 between 25-29 years, and 18 were between 30 and 34 years. There were 17 males and 32 females: in the higher education sample, 14 were male and 24 female, while in the TAFE sample, three were male and eight were female.

Findings and discussion

Sectoral movement

The 49 participants made a total of 165 transitions/transfers, ranging from two to seven moves (average 3.4). The first transition in each case was from secondary to tertiary education. Subsequent transfers were within and between the VET and higher education sectors. Table 1 summarises the number of moves made by each participant and the pattern of movement between and within the sectors.

Table 1: History of transitions/transfers

Number of transitions/transfers	of Students making this number of transitions only	Number and pattern of transitions
1 (from school)		18 into HE 31 into VET
2	12 (24.5%)	3 x HV* 9 x VH*
3	23 (46.9%)	3 x HVH 4 x H ² V 3 x HV ² 10 x V ² H 3 x VH ²
4	5 (10.2%)	1 x HV ² H 1 x V ² H ² 3 x V ³ H
5	3 (6.1%)	1 x H ² V ² H 1 x H ³ VH 1 x H ² VHV
6	5 (10.2%)	1 x HVH ³ V 1 x HV ³ H ² 1 x H ⁵ V 1 x V ⁴ H ² 1 x V3HVH
7	1 (2.0%)	1 x V ² H ² V ² H
Totals:	49 (100%)	165

* HV = move from higher education to VET; VH = move from VET to higher education

Superscript = number of consecutive moves within that sector

Participants made 116 transfers within and between the VET and higher education sectors (average 2.4). One quarter made one tertiary sectoral move, almost half made two and the remainder made between three and six such moves. There were more inter-sectoral than intra-sectoral transfers (64, 52), more transfers from VET into higher education than the other way (41, 23) and more intra-sectoral transfers within VET than within higher education (31, 21). This suggests there is greater fluidity within the VET sector for movement of students.

Movement by field of education

Table 2 illustrates that there were more moves to a different than the same field of education (70, 46), and considerably more movement from higher education to pursue a different field of education in VET than to pursue the same field of education (19, 4).

Table 2: Moves within and between the sectors

	Same field of education		Different field of education	
Inter-sectoral moves (64)	15	VH*	26	VH
	4	HV*	19	HV
Intra-sectoral moves (52)	16	VV	15	VV
	11	HH	10	HH
Total moves	46		70	

* VH = move from VET to higher education; HV = move from higher education to VET

There were a number of reasons for undertaking further study, including for vocational purposes, out of interest, following influence from friends and family or as a requirement for their employment.

However, most participants were motivated by interest, usually in a vocational context, to undertake a particular course of study. This was certainly the case for most of the first transitions from school to tertiary education and for the first sectoral move. For those who made only one inter-sectoral move, most of these were into a different field of education. This was often due to participants feeling they had misjudged their first choice of course, it had not met their expectations, and they consequently jumped from one field of education to another. Consequently, there were some students who made very extreme changes in field of education, often in the first inter-sectoral move – and these were attributed to a change in their area of interest, for example from electronics to philosophy and Spanish, or from accountancy to forensic chemistry or from archaeology to law.

Occasionally students made a foray into a completely different field of education in their first sectoral move but returned to their original field of education in their second sectoral move, such as from accounting to philosophy to business studies, or from accountancy to hospitality to commerce.

Where students were happy that their course of choice reflected their vocational interest, the second move was often to a field which continued or complemented that interest. Sometimes an element of one learning experience led to a sectoral move to develop further this general field of interest as a career. Participants who were confirmed in their aspirations by their course choices often continued to develop their careers in a controlled fashion, drawing on different courses to enrich their identified

interest. An example of this is moving from Carpentry to Team Leadership to Natural Resource Management to Civil and Water Engineering.

Despite the apparent shift of interest indicated by moves to different fields of education, very often participants were quite consistent in their interests. The fields of education/study, a government classification, appear to be an artificial construct when it comes to the lived experience of the students. For example, moves between nursing, sign language, counselling, diabetic education, immunisation and workplace training form a more natural progression for a person wanting to develop a career in health counselling than is suggested by bureaucratic classifications, as this learning journey (pathway?) actually involved five changes in field of education, three inter-sectoral moves and two intra-sectoral moves for this participant.

Others, who were more divergent in their interests, often were able to draw their seemingly disparate learning experiences together later to construct a unique career at the end of their study, for example shifting from civil aviation to dental surgery to move into a career as a dental surgeon in the Royal Australian Air Force. The participants generally considered that all their learning experiences were helpful and often did, in fact, manage to integrate them into a final goal.

For some participants there was an element of compulsion in their study choices, and this was usually pragmatically vocational, because it was a requirement of their jobs or because they were encouraged to study by their employers. For example, students moving from higher education to VET were much more inclined to enter a different field of education than those moving the other way, and interviews revealed that this was frequently for their own professional development, often at the instigation of employers. They were often required by their employers to complete workplace training, government practice, management or information technology certificates, which did not have any direct link to their expertise but which were considered necessary for their professional development. Other pragmatic course choices were made for reasons such as affordability, location/accessibility or ability to meet entry requirements.

Pragmatism often accounted for choices made when students were trying to earn an income to enable them to pursue study in their field of vocational interest. For example, courses in hospitality, administration and information technology were sometimes undertaken at VET as a means of enabling students to finance themselves to undertake courses at university. This often resulted in a parallel study pattern, where students were pursuing two different fields of interest for different personal or vocational goals. This pattern was also evident in older participants who were planning for a future career change when their current career might not be possible, for example preparing for a career in fashion while anticipating future burn-out in social work, or undertaking an IT course which might come in handy if wanting to change from a teaching career. When extreme changes in field of education happened later in their educational careers, usually this was due either to some practical factor which prevented them pursuing their original interest, for example, like moving from a career in the performing arts to law for health reasons, or from a genuine desire to experience life and pursue personal fulfilment, like going into marine studies after a career in disability.

The notion of learning pathway

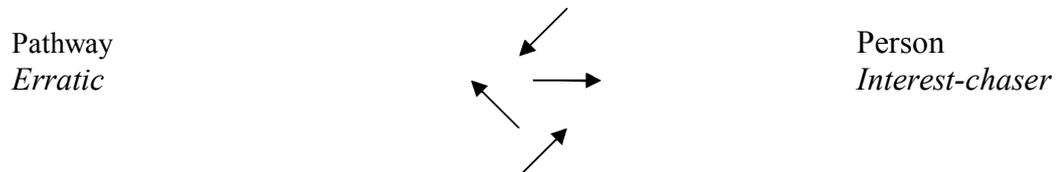
The notion of 'pathway' remains enigmatic. Its meaning is usually taken for granted and is rarely defined in reports since first employed in the Finn report in 1991

(McKenzie 2000). And yet it has since become a powerful organising concept behind much education and training reform in Australia. Certainly the term was interpreted by participants in this study in many different ways. It was, however, rarely perceived as linear. The images were rather of fragmented or discontinuous stages, and of a series of personal choices, a journey where the individual had autonomy to twist and turn. In some instances, the notion of a learning pathway was recognised as embodying a commitment to lifelong learning. Moreover, many did not feel that this term was the most apt description for their own learning history. Instead, they described it in such terms as stepping stones, zigzags, crooked paths, hops, skips and jumps, and cobblestones. Reasons included lack of guidance, lack of fit between courses they attempted, inexperience and lack of course prerequisites.

A typology of “learning pathways”

Detailed analysis of the interview texts reveals that there are discernable patterns of movement, both in sector and field of education, in the educational history of these participants. They selected courses as a result of diverse motivations, and the sector was often an incidental consideration. The fields of education serve as a barometer of this movement. From our study of these 49 students and their movements in and between fields of education, we tentatively propose a typology of five patterns based around two key elements: the pathway and the person. These are described below.

Erratic / interest-chaser



The first pathway may be described as erratic. Descriptors of this pattern of movement might also be multi-directional, or searching, or yo-yo when bouncing between different fields of education. Students undertaking this pathway were usually strongly motivated by interest and so we have termed these people ‘interest-chasers’. While this pattern was more obvious in early learning careers, and particularly in the first sectoral move, some participants with multiple moves demonstrated an ‘interest-chaser’ pattern of movement which extended long into their learning careers. An example in this study was:

School → Information Technology (VET) → Child Care (VET) → Science and Education (HE)
 → Theology (HE) → Telecommunications (VET) → Paramedical Training (VET) →
 Ambulance Studies (HE)

The following quotes are illustrative of this ‘interest-chaser’ type:

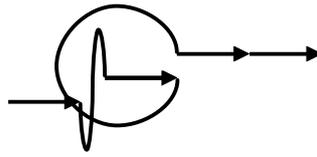
Any education always contributes – I look at my track record and I see how patchy it is, but I also see there is not a single course I have done that hasn’t helped me get work, hasn’t helped me at a trivia night, hasn’t hindered me in anyway. I always take up the chance to learn something new and this is the chance to do that and if I pick up some more qualifications along the way that is not a bad thing.

It’s been really good. I have been very lucky, I think, in being able to do all sorts of different things and actually work in them as well, so I feel very privileged, very lucky to be able to do that.

... just would like to think that if there is something you would particularly like to do, you can go out there and do it, and if you like it enough, someone will pay you. I firmly believe that – it has worked for me.

Linear / developer

Pathway
Linear



Person
Developer

Where early pathways were not erratic, they may not have been strictly linear. Sometimes this looked like a domino pattern where an element of one learning experience led to a sectoral move to further develop this as a career, resulting in a ‘flow’ into another course. Many of the second sectoral moves reflected this pattern. However, some students with several sectoral moves also showed consistent interest. These people we describe as ‘developers’, because they always had some consistent overall direction in their learning careers. An example in this study was:

School → Carpentry (VET) → Management of Team Leadership (VET) → Natural Resource Management (VET) → Civil and Water Engineering (HE)

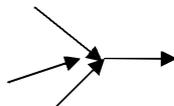
These quotes reflect the consistent interest and direction, even though course choices appear disparate:

I probably intend to work as an engineer to start with if possible to get some engineering experience, although a lot of it is a natural progression from the building trade – just at a higher level. I am also looking at an area where I can bring the engineering and the environmental management areas together, so there [are] a lot of engineering consultancy companies [which] employ engineers and environmental management staff.

To be honest, the main reasons why I chose the fields I have chosen, hospitality and marketing, is more of an interest rather than information source, so it’s been on what I have personally felt comfortable in and enjoy doing, rather than being pushed in. I like talking to people, coming up with plans and that sort of thing and I enjoy aspects of hospitality and marketing, so it’s more catering to those needs rather than information.

Merging / combiner

Pathway
Merging



Person
Combiner

Having explored interests in diverse areas, some participants then drew seemingly quite disparate learning experiences together to move into a more focused pathway. This was different from the ‘developer’ pattern in that it was far less linear. ‘Interest chasers’ sometimes developed into ‘combiners’. An example in this study was:

School → Nursing (HE) → Languages (VET) → Counselling (HE) → Diabetes Education (HE) → Immunisation (HE) → Workplace training and assessment (VET)

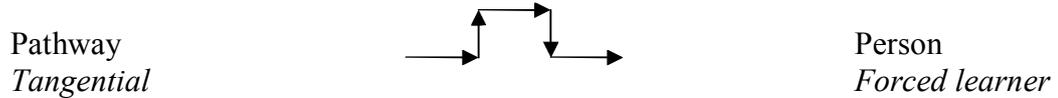
These two students reflect the ‘combiner’ type in their desire to integrate their various studies in a more focused direction:

[I made this move because] even though I had done a lot of education in my life ... it had never really come together to provide me with that number one career that I really wanted, so I felt that I wanted to become a professional in some sense and to do something really good.

My ultimate goal would be to have somewhere where I could use all of the skills that I have learned ... I would have the education qualifications to be able to say this is not working – change direction, so that I would be a knowledgeable resource – a

professional – seek your opinion – to be respected – to be multi-dimensional. All of these things have been a bit hit and miss along the way, but my eventual goal would be to change the system – I don't know how realistic that goal would be.

Tangential / forced learner



Sometimes participants undertook what appeared to be a completely different course of study for professional development or pragmatic reasons. This might appear like a detour or side step, hence ‘tangential’. We have called these types ‘forced learners’. An example from this study was:

School → Psychology (HE) → Counselling (VET) → Government Practice (VET) → Clinical Psychology (HE)

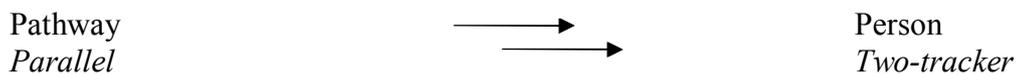
In the following three interviewee cases, the ‘forces’ were, respectively, job requirement, employer extra income and health reasons:

... it was a work requirement, Certificate IV in Government Practice. I got this job as a psychologist permanently in the State Government. I got the job through the graduate program and that course is a requirement for people who have come into government, so I had to do it. I was very unhappy about it and I complained constantly ... I [now] don't regret doing any of that stuff, even the government practising certificate turned out OK even though I complained about it. I gained a lot in terms of personal satisfaction and professional development.

Because my boss was going to get a few grand from the government in order to do it because it was classified as one of those retail traineeships or apprenticeships ... It was incredibly dumb, it was very, very boring, and it was teaching me absolutely nothing that I didn't know before.

It was my health that caused me to want to do something more academic ... The main goal was to be able to earn a regular income and work regular hours, because that is better for my health, and to have a job that is more intellectual than physical. The other one is that I would like to be in law. That's the main goal, but it's like a kind of a fall-back position that I could get something else with that degree.

Parallel / two-tracker



There were two common contexts for this pattern. One was some older interviewees aiming to provide an alternative career for when their current one might not be possible. The second was when students were trying to improve their chances of earning an income while studying. In both cases, a parallel learning pathway was established, and so we called these people ‘two trackers’. An example from this study was:

School → BA (HE) → Anthropology (HE) → Counselling (HE) → Primary Health Care (HE) → Industry Training (Fashion) (VET)

These illustrative excerpts reveal the parallel tracking and the reasons for it:

I went into it partly because it was a hobby and something I was interested in pursuing, and partly because I wanted to have it up my sleeve, so to speak, as a

means of changing career ... [I was] wanting my independence, and the thought of being able to start up my own business and work from home was a beautiful thing. Partly that if the biggest complaint I get through the day is, 'I want that hemline differently', rather than 'I am going to kill you, you bitch', that seems like a good swap; partly that it is an interest that I would feel quite proud if I could turn it into a business; and partly that I can see a gap in the market, and even if I just learn how to do things myself, so I am not having to pay exorbitant amounts of money to someone for something that I don't actually like. If I am able to sew for myself, that is great. If I am able to do it for my friends, that's better. If I can build a business out of it, then I would be a very happy little chook.

Probably having worked in the disability field, I can see areas that I just can't accept, and I couldn't see myself going any higher because of the political rhetoric I don't like, and I also couldn't see myself working in the field I work in forever. I then thought about my options: What would I like to do? What do I like to do? ... when I went into [Marine Science], I had that romantic view that I would be able to travel the world – be an Indiana Jones!

Yes, that was just a tool to earn some instant cash. It was pretty hard to get bar work ... without some sort of formal training. I never wanted to work in hospitality, but it's just that thing – something to fall back on, especially when you are a student, it is handy to have that after-hours sort of work.

Summary

This study has revealed a diversity of learning trajectories or journeys. Despite first impressions of 'crazy paving' rather than any form of orderly 'learning pathway', close analysis suggests there are indeed some common patterns of movement. While participants in this study were aged under 35 years, there were patterns which were more common in younger participants or in the early learning careers of older participants. This suggests these patterns of movement may be developmental within a lifelong learning framework, and may become further apparent with people's need to extend their working lives or enrich their personal lives via study throughout their life time.

There have been many theories of career development. These have been grouped by Patton and McMahon (1999) into theories of content and theories of process, the former referring to influences on career development and the latter to changes over time. Theories of process present stage models, or patterns, of development linked to personal growth over a life span.

Career development involves a lifelong series of choices, one element of which is the choices one makes about the type of education one undertakes. This study has focused on participants' tertiary course selections. It has examined some of the process influences on the educational choices undertaken by participants – the reasons for choosing – and recorded their history of tertiary education choices made over a period of time. These choices are reflected in the fields of education and the sectoral location of courses. It is proposed that there are patterns of educational choice which may reflect the stage of career development an individual finds oneself in at a particular stage in one's lifetime and which may be developmental. This might help policy-makers and institutional planners with insights into how best to position relationships between sectors and to implement policies and services that help learners navigate through education systems that are quite different in philosophy and pedagogy.

References

- Australian National Training Authority (ANTA) (1998). *A Bridge to the future: Australia's national strategy for vocational education and training 1998-2003*. ANTA, Brisbane.
- Australian National Training Authority (ANTA) (2003). *Shaping our future: National Strategy for VET 2004-2010*. ANTA, Brisbane.
- Bloomer M. & Hodkinson P. (2000a). 'The complexity and unpredictability of young people's learning careers', *Education and Training*, 2:2, 68-74.
- Bloomer M. & Hodkinson P. (2000b). 'Learning careers: Continuity and change in young people's dispositions to learning', *British Educational Research Journal*, 26:5, 583-507.
- Department of Education, Science and Training (DEST) (2002). *Varieties of learning: The interface between higher education and vocational education and training*, www.dest.gov.au/crossroads/pubs/varieties of learning [accessed 14/12/04].
- Gardener, M. (2002). *The review of pathways articulation through the post-compulsory years of school to further education, training and labour market participation*, Queensland Department of Employment and Training, and Department of Education, Brisbane.
- Golding, B. (1999). 'Two-way movement and recognition between university and TAFE in Victoria between 1990 and 1996', doctoral thesis, Centre for the Study of Higher Education, University of Melbourne, Melbourne.
- Harris, R., Sumner, R. & Rainey, L. (2005). *Student traffic: Two-way movement between vocational education and training and higher education*. National Centre for Vocational Education Research, Adelaide.
- House of Representatives, Standing Committee on Education and Training (2004). *Learning to work: Report on the inquiry into vocational education in schools*. Commonwealth of Australia, House of Representatives Publishing Unit, Canberra.
- Karmel, T. & Nguyen, N. (2003). 'Australia's tertiary education sector', paper to 7th National Conference of the Centre for the Economics of Education and Training, *Strategic directions for VET*, Ascot House, Melbourne, 15 September.
- McKenzie P. (2000). 'Youth pathways to promote lifelong learning', paper presented to the Centre for the Economics of Education and Training (CEET) conference *Mobilising Resources for Lifelong Learning*, Melbourne, 30 October.
- McMillan, J., Rothman, S. & Wernert, N. (2005). *Non-apprenticeship VET courses: Participation, persistence and subsequent pathways*, Research report 47, Australian Council for Educational Research, Camberwell.
- Moodie, G. (2003). 'VET-higher education transfers and the structure of tertiary education', paper to 6th AVETRA Conference, *The Changing Face of VET: Reflection, Regulation and Re-engineering*, Australian Technology Centre, Sydney.
- Moodie, G. (2004). 'Reverse transfer in Australia', *International Journal of Training Research*, 2:2, 24-48.
- Patton, W. & McMahon, M. (1999). *Career development and systems theory: A new relationship*. Brooks/Cole, Pacific Grove.
- Pitt, H. (2001). 'Between the sectors: New issues when examining student movement', paper to 9th International Conference on Post-compulsory Education and Training, Gold Coast, Queensland.
- Ramsay, E., Tranter, D., Kain, M. & Sumner, R. (1997). *Cross-sectoral linkages: A case study*. Evaluations & Investigations Project, DEETYA, Canberra.
- Teese, R. & Polesel, J. (1999). 'Tracking students across institutional and sector divides: The potential of TAFE and higher education statistical collections', paper to Post-compulsory Education and Training Conference, *Looking to the Future*, Lifelong Learning Network, University of Canberra, Canberra, 27 August.
- Teese, R. & Watson, L. (2001). *Mapping and tracking: Data collections form monitoring post-compulsory education and training*. National Centre for Vocational Education Research, Adelaide.
- Walton, S. & Mallon, M. (2004). 'Redefining the boundaries? Making sense of career in contemporary New Zealand', *Asia Pacific Journal of Human Resources*, 42:1, 75-95.