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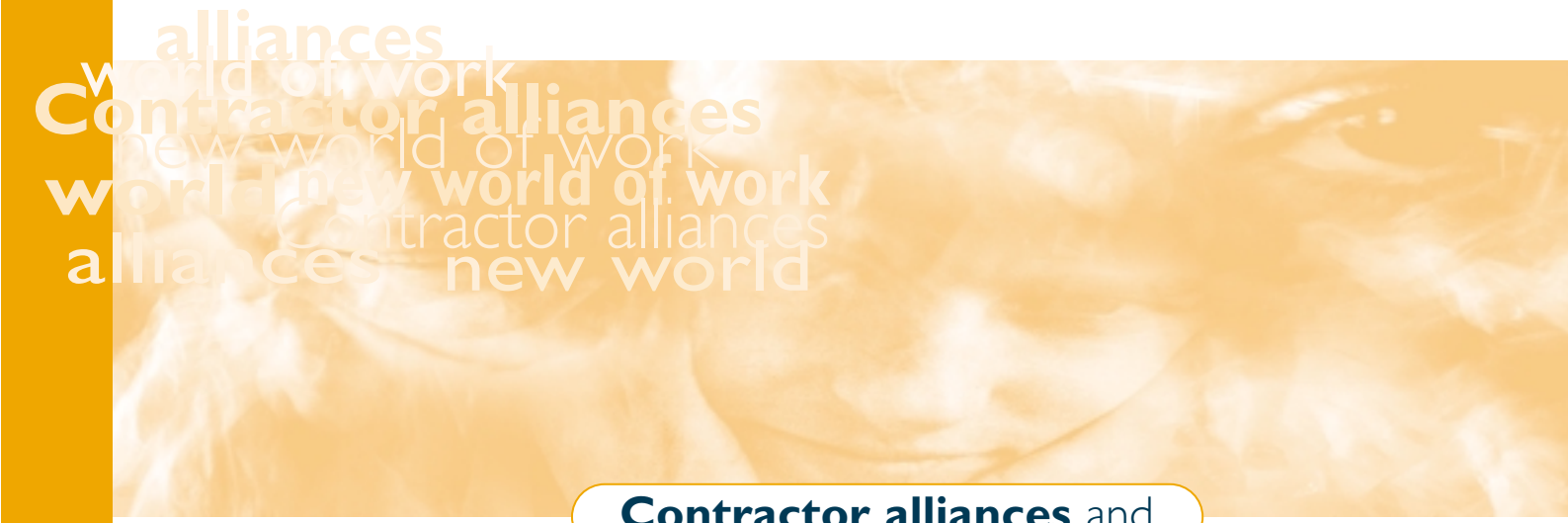

Contractor alliances and the **new world** of **work**

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H Bound

ISBN 0 87397 755 6 print edition

ISBN 0 87397 756 4 web edition

TD/TNC 68.04

Published by NCVER

ABN 87 007 967 311

252 Kensington Road, Leabrook, SA 5068
PO Box 115, Kensington Park, SA 5068, Australia
www.ncver.edu.au

Acknowledgements

We would like to thank the following people for their contribution to this project:

- the participants in the study who willingly gave their time
- our colleagues at the University of Tasmania and the Centre for Research and Learning in Regional Australia for supporting us in this project
- the people who gave feedback on early drafts of the report. Those discussions helped to draw out important issues that needed to be addressed in the report. They included: Steve Bain, Australian National Training Authority; Richard Curtain, Curtain Consulting Melbourne; Richard Hall, Australian Centre for Industrial Relations Research and Training, University of Sydney; Fran Ferrier, Monash University; Jane Figgis; Terri Seddon, Monash University; Paul Stewart, Department of Training and Employment Western Australia; Peter Waterhouse, Workplace Learning Initiatives, Melbourne
- the constructive comments of the anonymous reviewer
- Jennifer Gibb and Andy Smith, National Centre for Vocational Education Research for their encouragement and support

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Executive summary

As the arrangements under which many people work are undergoing radical transformation, the conventional view of work—a permanent, full-time job within a formalised work organisation—is no longer relevant for many working people (Curtain 1996). More and more people are responsible for finding their own work, not as employees in stable organisations but through temporary short-term and contractual working arrangements (ACIRRT 1999; VandenHeuvel & Wooden 1999). Sometimes contractors join up with others in what can be called 'loosely coupled strategic alliances' (Owen & Bound 1998). The problem is that little is known about the knowledge, skills and attitudes required by contractors working in alliances with others to operate successfully, how the existing vocational and education training (VET) system meets these needs and the implications for VET for the future. This problem is at the heart of the current research study.

This study is exploratory in nature and therefore the results need to be interpreted with caution. However, the conclusions drawn may be suggestive of processes operating elsewhere in the labour force. It is contended that there are similarities in demands applying to contractors and employees in contemporary organisations. This is because, in contemporary work organisations, changes in work structures have resulted in workers employed on a permanent basis also being expected to 'act like subcontracted workers' (Smith, V 1997, p.331).

The qualitative design of this study is based on a case-study approach. Six strategic alliances were selected across three States and across different industries. Case studies were selected in New South Wales, Victoria and Tasmania. Purposeful sampling was used to identify strategic alliances for participation in the research. In all, 25 interviews were conducted, 13 with people participating in contractor alliances and 12 with those who were identified as stakeholders in the research study (for example, contracting organisations, VET providers). The alliances included:

- a business services alliance, where two of the six contractors involved were interviewed. The type of service provided by this alliance included the development and/or adaptation of systems including software and/or hardware to meet clients' office needs
- a building and construction alliance, which consisted of the two contractors interviewed and who operated their own small businesses, both of which were registered as partnerships. The work undertaken was residential painting, although it sometimes included internal painting of office blocks
- a community services alliance, which consisted of an independent contractor who had operated very successfully on her own for 10 years. The second alliance member, trading under her own name, combined working arrangements including working as an independent contractor and working as a part-time, casual employee of a large institution
- an environmental engineering alliance, which consisted of two contractors associated with two incorporated companies
- a training alliance, which consisted of interviewing three contractors, each from three incorporated companies. This alliance developed and delivered vocational education and training programs
- a communications and information technology alliance, where two contractors were interviewed from a loose network of creative writers and designers who used and developed information technology

The knowledge, skills and attitudes required by contractors to operate successfully can be described within four categories:

- the technical/specialist knowledge they have (their job content knowledge)
- the management skills required by people responsible for their own work
- the ability to work effectively with others
- the capacity for self-awareness and skills related to learning and development

The key findings include the following:

- In terms of technical skills, all contractors interviewed needed to be proficient in their job-specific technical knowledge and skills in order to value and market that work appropriately and to undertake the work reliably. Some alliances were formed where contractors had the same technical skills and knowledge and in these cases the alliance served the purpose of assisting contractors to manage the uneven demands for work. In other cases alliances were based on complementary job-specific knowledge and skills and the alliance served the purpose of expanding opportunities to undertake work.
- To work effectively in an alliance, contractors need to be able to recognise the strengths and limitations of their own technical/specialist skills and knowledge and that of others. They required a range of skills associated with managing the work, skills in identifying client needs, working with clients and managing client expectations.
- Contractor alliance members needed a strong sense of their own abilities. Metacognitive strategies and cultural understanding appear to be critical in contractor alliance work.

Key findings in relation to how learning occurred and its implications for VET include the following:

- The knowledge, skills and attitudes needed to maintain technical proficiency were obtained through a variety of means, including VET courses, teaming up with others who had the proficiencies, seeking information and talking with others. VET courses were used for a variety of purposes, including to extend networks and to learn skills for future needs.
- Learning by doing is supported by reading, using the Internet, learning from others in the alliance and through the use of networks.
- Better integration of research information on particular business sector trends into the VET sector is needed to support particular industry and business strategies.
- VET providers need the capacity to deliver short, just-in-time content, and require support to enable them to do so innovatively and creatively in a way that meets the demands of the target audience.
- There is a need to re-evaluate pre-service programs in terms of how they assist people to prepare for a new world of working arrangements where they may need to be more reliant on their own resources to find work, including seeking contracts and being self-employed.
- People involved in contractor alliances participate in many communication processes, including self-expression, as well as mutual problem identification, needs identification, conflict resolution and negotiation.
- Management-focussed courses need to be structured to include the knowledge, skills and attitudes required to plan, organise and manage a range of activities both individually and collectively, including the use of tools, such as those found in technologies, which enhance collaborative work. Such courses need to be specifically targetted at contractors, including those working in alliance arrangements.
- More work needs to be undertaken into group identity in relation to the concept of 'temporary teams' and its relationship to performance.
- Work on the competency 'cultural understanding' needs to recommence and be expanded to incorporate use of culture in both work and other social contexts.
- Further development should be undertaken on an additional generic competency 'learning to learn'. These attributes should subsequently be incorporated into all pre-service programs and schools.

Introduction

The arrangements under which many people work are undergoing radical transformation. Indeed, it is contended that the conventional view of work—a permanent, full-time job within a formalised work organisation—is no longer relevant for many working people (Curtain 1996). More and more people are responsible for finding their own work, not as employees in stable organisations but through temporary short-term and contractual working arrangements (ACIRRT 1999; VandenHeuvel & Wooden 1999). Sometimes these new forms of working arrangements can involve either working alone as a contractor, or joining up with others in what can be called 'loosely coupled strategic alliances' (Owen & Bound 1998). These alliances between contractors are often short-term arrangements and the individual participants in the alliance may (or may not) be formally recognisable as a small business or explicit work organisation. In this study these arrangements will be called 'contractor alliances'. The problem is that little is known about the knowledge, skills and attitudes that contractors working in alliances with others require to operate successfully, how the existing vocational and education training (VET) system meets these needs and the implications for VET for the future. This problem is at the heart of the current research study.

Aim

This study investigates the knowledge, skills and attitudes required to operate in new working arrangements where people operate as contractors in an alliance with others. The study aims:

- to determine the knowledge, skills and attitudes needed by contractors who are responsible for their own work and who work with others in loosely formed strategic alliances
- to ascertain, where appropriate, how people working within such arrangements have developed such knowledge, skills and attitudes
- to identify the ways in which the current VET system enables and constrains the development of relevant knowledge, skills and attitudes

Before addressing these aims, it is important to understand why these new working arrangements have emerged and to review their characteristic features. The next section will outline the changes which have been occurring and which have led to the increasing prominence of contractor alliances as a new form of working arrangement.

The changing shape of work environments

Changes associated with technology, the globalisation of markets and rapid market shifts have together resulted in an increasing pace of change in work organisations and these, in turn, have led many such organisations to change the way work is undertaken.

Technology, for example, has advanced communication possibilities, and in combination with economic shifts has contributed to opportunities for, and pressures towards, globalisation processes. Globalisation is a term used to describe how the organisation of production and its related activities (for example, finance, consumption) are organised on a global scale (Castells 1997, p.66). Such developments have influenced—and been influenced by—changes in

consumer demand (Piore & Sabel 1984). Piore and Sabel (1984) contended that changes in consumer demand have broken up mass markets, thus favouring firms who can react flexibly to market shifts: 'a plant community of multi-skilled workers seems a precondition for agile maneuvering in a hostile world' (Piore & Sabel 1984, p.213). These shifts have led to standards for products and demands being set at an international level and for a greater demand for organisational responsiveness (Ford 1990). In summary, these changes have led to 'the intensification of competition, particularly international competition; changes in the demand for goods and services; and the general increase in uncertainty and in the pace of change in technology, production processes and markets' (Bailey 1990, p.19). In this context, many organisations have engaged in restructuring work to create more flexible production systems in order to cope with this changing external environment.

The emergence of new organisational forms

For organisations operating in these turbulent times, the notion of flexibility to enhance responsiveness has become increasingly important (Cappelli 1997). Flexible forms of work and work organisation have been generally described as a shift from Fordist to post-Fordist means of production (ACIRRT 1999). This transition describes a shift from work organisations designed for mass production to those designed for 'flexible specialisation' that is, responding to market shifts, adapting and changing quickly to meet consumer demand. Of interest in this study are the ways in which these changes in work organisation have led to transformations of employment arrangements. Smith summarised literature on two main categories of change in employment arrangements required by the 'flexible' firm, labeling these functional and numerical flexibility (Smith, V 1997).

Functional flexibility: The high involvement and/or 'networked' organisation

One type of change which organisations have made in response to rapidly changing environments is to engage in strategies to enhance 'functional' flexibility. Functional flexibility can be achieved in two ways. The first is based on human resource management (HRM) strategies to increase involvement of workers and, by doing so, to increase flexibility of production. This strategy involves work innovations 'premised on securing the deeper engagement of core workers, on continually training them, and on exploiting their accumulated knowledge and experience' (Smith, V 1997, p.316). Such innovations include structural, organisational and technological re-organisation aimed at employee involvement and decision-making. These strategies include job rotation and expansion and use of complex technologies programmable by workers themselves.

A second strategy organisations can use to achieve functional flexibility is to join up with other organisations through networking or through alliances. A successful organisational alliance allows partner organisations to maximise their respective strengths, to rapidly expand capability and to move into new markets without having to formally adjust the structure of the original organisation. Such temporary alliances are increasing in popularity (Larsson et al. 1998; Sydow & Windeler 1998) as a means of responding flexibly and increasing capacity to change.

Numerical flexibility: The 'right-sized' organisation

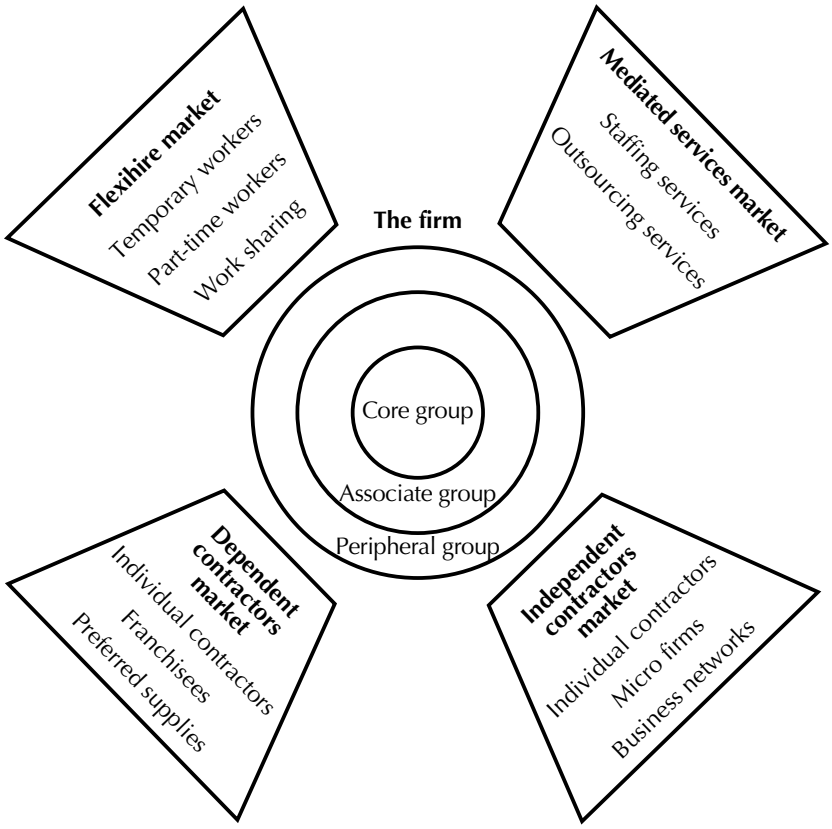
The second change Smith (1997) calls 'numerical flexibility' is aimed at increasing flexibility of work organisation by downsizing the workforce to a core business. The HRM strategies utilised here enable employers to expand and contract the size of the workforce to accommodate fluctuations in demand. Numerical flexibility signals the ascent of 'contingent' jobs and the 'decline of the permanent employment model' (Smith, V 1997, p.326). Organisations are downsized and non-core activities are undertaken by a peripheral workforce that is either employed utilising internal HRM mechanisms (part-time, temporary and casual workers understood as 'internalised contingent workers') or outsourced and contracted out ('externalised contingent workers').

The kinds of activities that are outsourced to achieve flexibility within organisations dictate the kinds of conditions contractors can demand. In some cases, organisations draw on a contingent workforce (including contractors, casual workers or short-term, temporary workers) to supplement existing capacity within the organisation in response to changes in demand (termed 'capacity outsourcing'). In other cases outsourcing is used to access specialised skills or equipment (termed 'specialist outsourcing') (ACIRRT 1999).

Labour strategies in contemporary work organisations

Burton-Jones (1999) conceptualised the contemporary work organisation and its labour supply as a combination of relatively permanently employed workers and contingent workers (see figure 1).

Figure 1: Sources of labour supply



Knowledge Supply Model™: Seven sources of knowledge supply

Source: Burton-Jones (1999, p.58)

Full-time workers comprise a core group of 'high involvement', high-value workers, and two other groups of workers who are 'associate' and 'peripheral' to the business organisation (for example, those who undertake administrative functions such as HR and IT). Peripheral to the organisation—though important for labour supply—are internalised contingent workers, generally supplied by the 'flexihire' market, as well as services that are mediated through other organisations, such as outsourced security, maintenance and similar infrastructure support functions (see figure 1). Burton-Jones (1999) also distinguished between two types of externalised contingent workers, namely 'dependent' and 'independent' contractors. With the exception of people employed in franchises, the focus of this study is on those contractors who supply goods and services to organisations. Those contractors may be 'dependent' in the sense that they may rely on one or a few contracting organisations for work, or they may be 'independent', in that they may supply goods and services to many contracting organisations.

Significance of the study

While changes in working arrangements are increasing in significance, little is known about the skills, knowledge and attitudes that contractors use to operate successfully in uncertain and changing conditions, or the elements that enable people to work successfully in alliances with others. This is despite the rapid growth in contractor working arrangements. What are the attributes needed to operate successfully in these turbulent conditions? Although no literature could be found on the phenomenon of contractor alliances, interviews and observations undertaken in the 'scoping' phase of this study suggested that, like organisational alliances, contractors also join up with other contractors in temporary working arrangements in order to increase their functional flexibility and therefore to enjoy a greater security and continuity of working life. How do vocational and education and training systems prepare (and support) people to operate in non-standard working arrangements such as contractor alliances? This study sheds light on this important and rapidly emerging work group.

This study is exploratory in nature and therefore the results need to be interpreted with caution. However, the conclusions drawn may be suggestive of processes operating elsewhere in the labour force. It is contended that there are similarities in demands applying to contractors and employees in contemporary organisations. This is because in contemporary work organisations, changes in work structures have resulted in workers employed on a permanent basis also being expected to 'act like sub-contracted workers' (Smith, V 1997, p.331).

The focus of the study

Of interest in this study are those people who work as contractors and who work in alliance with others. For the purposes of this study, a contractor is someone who:

- is responsible for finding their own work, often on a short-term basis, and who enters into a contract (formal or relational) to provide goods and/or services of a specific nature within a specified period
- invoices for work undertaken rather than receiving a wage or salary
- takes responsibility for covering their own infrastructure costs, including insurances and superannuation
- may trade under their own name, have a registered business name or be incorporated as a company
- derives most of their income from contractor work

A contractor alliance is where:

- two or more individuals or groups of contractors co-operate together to tender for work under the conditions specified above
- the individuals/groups have combined co-operatively as partners (irrespective of whether contracts won formally specify the nature of this partnership)
- organisation of the alliance is informal and remains limited by the scope of the contracted work
- there is no requirement that the alliance will exist beyond the completion of the work

Research questions

The following research questions guide the study:

- What knowledge, skills and attitudes (technical and process) do people need to operate effectively in these new working environments?
- How do they acquire the knowledge, skills and attitudes necessary to maintain technical, occupation-specific proficiencies?
- How do they acquire the knowledge, skills and attitudes needed to operate successfully within loosely coupled strategic alliances?
- What kind of VET structure/arrangements would best support people working in these environments?

Outline of the report

The following chapter outlines the literature informing the research study. It concludes that, while contracting-out is increasing in size as a working arrangement, little is known about the features of contractors. While few direct studies of contracting work have been undertaken, the challenges contractors face can be gleaned from a range of different literature sources. These studies suggest contractors and contractor alliances face challenges in relation to managing relationships and reading the market, applying knowledge across organisations and contexts, receiving feedback and engaging in reflection and self-development. In the subsequent chapter the research design utilised is outlined, while the chapter entitled 'Working and learning in contractor alliances' outlines the main findings. It concludes that communication and collaboration are key processes for contractors working in an alliance. However, operating in a market creates tensions between collaboration and competition and these tensions also need to be managed within the alliance if it is to be successful. The following chapter discusses these findings in terms of the research questions, identifying the knowledge, skills and attitudes required to operate successfully in a contractor alliance and how these are learnt. The final chapter discusses the implications of these findings in relation to VET and suggests further areas of attention for researchers, policy-makers and training providers.

Strategic alliances: What we already know

This chapter reviews literature describing emerging organisational forms and concludes that contractor alliances are a hybrid form developing from two emerging contiguous working arrangements. Contractors typically operate as sole operators and have limited, if any, formalised organisational structure. Yet, given the uncertain and changing environments contractors typically work in, some are also using strategic alliance approaches to manage in that environment. The chapter seeks to identify insights from existing research literature relating to:

- changing organisational forms
- the characteristics of contractors and their alliances
- the challenges facing contractors, including skills and knowledge needs
- the means by which existing VET structures are meeting these needs
- the implications for future research

Emerging organisational forms

How are organisations and individuals responding to the rapidly changing work environment outlined in the introduction?

Networks and organisational alliances

In uncertain and ever-changing environments, developing networks and strategic organisational alliances are strategies increasingly used by organisations to achieve functional flexibility (Larsson et al. 1998). Sydow and Windeler (1998) observed that organisations in the process of undergoing structural change in terms of downsizing to achieve their 'core competencies', do not 'simply become islands of smaller firms but interfirm networks' (p.265). Such interfirm networks are sometimes referred to as constellations of strategic or collaborative alliances, and are regarded by some (for example, Sydow & Windeler 1998) as the emerging institutional arrangement of the twenty-first century.

An organisational strategic alliance is typically defined as 'any voluntarily initiated cooperative agreement between firms that involves exchange, sharing, or co-development, and it can include contributions by partners of capital, technology, or firm-specific assets' (Gulati 1999, p.398). Successful alliances enable organisations to help firms gain new competencies, conserve resources, share risks and quickly enter new markets (Hutt et al. 2000). This is because such alliances, under certain conditions, enable organisations to learn from their respective partners (Larsson et al. 1998). Organisational alliances are principally based on relationships. They provide an opportunity for each organisation to benefit from the collective strengths of alliance partners, while each organisation maintains its own legal identity. Alliances provide 'thicker' information channels (Sydow & Windeler 1998), demand more loyalty and trust (Hutt et al. 2000) and engender a certain degree of reflexivity amongst members and show a degree of social embeddedness (Granovetter 1985). Social embeddedness implies the development of stable relationships that shape the expectations and behaviours of the actors. Yet relationships in an alliance are also embedded in a social and economic context which involves the interplay of 'co-operation, competition, autonomy and dependence, trust and control' (Sydow & Windeler 1998, p.267).

Hutt et al. (2000) for example, found that many organisational alliances failed to meet expectations because key features essential to the success of an alliance were ignored. These features included nurturing a close working relationship and interpersonal connection between partners, especially 'boundary spanning' members. They concluded that 'surprisingly, human or people factors appear to have remained unconsidered or, at worst, dismissed in the alliance research tradition' (Hutt et al. 2000, p. 51). Communication, the proactive exchange of information, leading to the shared interpretation of goals and trust were identified as elements needed to make alliances a success. Members also needed to be compatible with others and have a commitment to working with them (Hutt et al. 2000).

It is contended that the development of alliances in the ways described above are not limited to formal work organisations, nor indeed that being a permanently employed wage or salary earner, will remain the dominant sector of the labour force. Indeed, it will be argued that, as the labour market changes shape and the number of people responsible for finding their own work rises, the attributes of organisational alliances will increasingly be needed by individuals if those individuals are to enjoy a continuity of working life. What evidence is there in the literature for the emergence of individual contractor work as an emerging form of working arrangement?

Table 1: Non-regular forms of employment, selected countries, 1973–93

	Self-employed (% of non-agricultural employees)		Part-time (% of total employment)		Temporary (% of total employment)		Total non-regular (% of total employment)	
	1973	1993	1973	1993	1973	1993	1973	1993
USA	6.7	7.7	15.6	17.5	–	–	(22.3)	(25.2)
Canada	6.2	8.6	9.7	17.2	7.5	8.3	23.4	34.1
Australia	9.5	12.9	11.9	23.9	15.6	22.4	(37.0)	(49.2)*
Japan	14.0	10.3	13.9	21.1	10.3	10.8	38.2	42.2
Austria	11.7	6.3	6.4	10.1	–	–	–	–
Belgium	11.2	13.3	3.8	12.8	5.4	4.7	20.4	30.8
Denmark	9.3	7.0	(22.7)	23.3	12.5	10.7	(42.5)	44.0
Finland	6.5	9.5	6.7	8.6	(11.3)	13.5	(24.5)	31.6
France	11.4	8.8	5.9	13.7	3.3	10.2	20.6	32.7
Germany	9.1	7.9	10.1	15.1	9.9	10.2	29.1	33.2
Ireland	10.1	13.0	(5.1)	10.8	6.1	9.9	(21.3)	32.8
Italy	23.1	24.2	6.4	5.4	6.6	5.8	36.1	35.4
Netherlands	9.1	8.7	(16.6)	33.4	5.8	10.0	(31.6)	52.1
Norway	7.8	6.2	23.0	27.1	–	–	(30.8)	(33.3)
Portugal	12.7	18.2	(7.8)	7.4	(13.1)	8.6	(33.6)	(34.2)
Spain	16.3	18.7	–	6.6	15.6	32.0	(31.9)	57.3
Sweden	4.8	8.7	(23.6)	24.9	(12.0)	11.9	(40.4)	45.5
UK	7.3	11.9	16.0	23.3	5.5	5.7	28.8	40.9

Note: * Estimate (source ILO and OECD cited in Burton-Jones [1999])

Source: Burton-Jones (1999, p.48)

Changes in working arrangements

The dramatic increase in different kinds of working arrangements emerging as a result of the changes identified in the first chapter was discussed by Burton-Jones (1999). Table 1 shows the changes over a 20-year period in the kinds of employment arrangements in Organisation for Economic Co-operation and Development (OECD) countries. Burton-Jones (1999, pp.46–9) argued that the move away from regular full-time employment is illustrated in the trends shown in table 1. Table 1 suggests that by 1993 across the OECD countries studied, approximately 39% of all employment, on average, was non-regular. The data presented include a degree of overlap between categories (for example, many temporary workers would also be part-timers) but omit wage-based home-working and 'piecework' labour which would have otherwise increased the percentage of non-regular employment. Thus, Burton-Jones argued, the estimate of 39% is, if anything, conservative (see table 1).

In response to the considerable interest in changes in the nature and extent of employment arrangements, the Australian Bureau of Statistics (ABS) conducted a survey in 1998 and a summary of the results is presented in table 2.

Table 2: Forms of employment in Australia

Employment form	Number (000's)	%
Employees with leave entitlements	4939.7	58
Casuals	1486.9	18
Other employed persons (for example part-time)	299.5	4
Owner–managers (incorporated)	590.9	7
Owner–managers (unincorporated)	1078.8	13
Total	**8395.8**	**100**

Source: ABS (1998)

The forms of employment survey (FOES) was developed to examine the nature of working arrangements not measured in previous surveys. Respondents were asked a number of questions about the nature of their work relationship with their employer, or with the business in which they worked. Table 2 shows that there were an estimated 8 395 800 employed persons (excluding contributing family workers and persons who worked only for payment in kind). The table also shows that there were an estimated 4 939 700 persons who were employees with leave entitlements and 1 486 900 persons who self-identified as casuals. The category 'other employed persons' (299 500) included people who exhibited employee-like characteristics (for example, part-time), as well as characteristics more associated with self-employment (that is, being able to sub-contract their own work). The survey also identified 590 900 owner–managers of incorporated enterprises and 1 078 800 owner-managers of unincorporated enterprises in 1998. A high proportion of owner–managers of unincorporated enterprises had variable earnings (84%).

According to the survey, there were 253 600 owner–managers (15%) who were in some way dependent on their client. Some 29% of these worked in construction, with a further 21% in property and business services. The most common occupations reported were tradespersons and related workers (25%) and intermediate production and transport workers (18%). There were 1 416 100 owner–managers (85%) who were independent of their client. Of these workers, 17% were in property and business services and 16% each were in construction and in retail trade. Some 21% of this group worked as managers and administrators and 19% as tradespersons and related workers. Owner–managers who were in some way dependent on their client were more likely to undertake contract work. Almost three-quarters (74%) of this group undertook contract work compared to 30% of those who were independent of their clients. What is important to observe here is that these changes in working arrangements are estimated to be growing (Burton-Jones 1999) and affect a reasonable proportion of Australia's labour force. The implications for VET are significant.

Contractor organisational forms

Contractors typically range in type from those trading under their own name, to having established a small business or partnership, through to operating an incorporated company and sometimes employing others. Figure 2 illustrates the growth of 'own account' or self-employed workers relative to wage and salary earners.

Figure 2: Growth in self-employment and wage and salary earners 1978–1993

Source: Derived from ABS, *The labour force Australia*, cat.no.6204.0 cited in Hall et al. (2000), volume 2, p.12

As figure 2 indicates, the number of self-employed people has been steadily increasing. Data from the Australian Workplace and Industrial Relations survey (AWIRS) shows that since 1990, there has been a significant increase in the use of outworkers which includes contractors. Data drawn from AWIRS (ACIRRT 1999) showed that:

- over one-third of firms had contracted-out services
- public sector organisations were far more active than their private sector counterparts in outsourcing (54%)
- just under one-third of firms in the private sector had engaged in outsourcing of work

In five industry sectors, the majority of workplaces included in the AWIRS sample had fulfilled these conditions. These sectors were:

- Electricity, gas and water supply (66.8%)
- Construction (60.8%)
- Education (60.4%)
- Mining (55.3%)
- Government administration (51.5%)

The authors and others (for example, VandenHeuval & Wooden 1999) comment that these figures are likely to be an underestimate of the current extensiveness of contracting-out activity, for three reasons. First, the trend to contract out services has been expanding (VandenHeuvel & Wooden 1999) and the above findings are drawn from data now five years old. Second, the sample used by AWIRS only included those organisations with 20 or more employees and there is evidence to suggest those firms of less than 20 employees find outsourcing particularly attractive (Abraham & Taylor 1996). Third, there is evidence to suggest that head office staff (in large organisations) are not able to identify accurately the number of contractors employed if such workers do not appear on the pay roll. In firms where the decision-making for project management has devolved, head office staff may not know who is employed on projects undertaken by line management.

The Australian Centre for Industrial Relations Research and Training (ACIRRT 1999) also notes that not only has there been an increase in the extent of outsourcing, but the types of functions being outsourced have been changing. This is linked to changes in work organisation as firms evaluate what is core business and what is peripheral to that core. Sometimes this can include entire processes, such as those involved in manufacturing (ACIRRT 1999). In the public sector, for example, the adoption of outsourcing with competitive tendering practices means that employees formerly employed as permanent employees are having to bid for the work they used to be employed to do. Clearly the kinds of services and expertise contracted out will depend on the reasons for using such strategies in the first place.

As discussed in the introduction, services may be contracted out to independent contractors or to mediated services such as labour hire firms established to provide outsourced activities. The reasons for contracting out services—in all industries—are manifold. According to the literature (ACIRRT 1999; VandenHeuval & Wooden 1999) reasons include a combination of the following:

- to achieve better access to skills
- to respond to changes in demand for labour
- to reduce costs
- to focus on strategic initiatives and outcomes rather than inputs

By contrast, in some industries (in particular, the IT industry), outsourcing enables an organisation to import needed skills rather than 'growing' them within the company. In some areas of the IT industry, outsourcing is the only means of obtaining the skills needed since such companies are unable to keep staff with the expertise required. In a number of surveys (Gordon & Walsh 1997; Pearce 1998), outsourcing was primarily used to respond to market demands and to ensure the company was not left with a large workforce in times of low demand for services. There is some evidence to suggest that some organisations use outsourcing as a means of avoiding higher costs associated with unionised labour or paying employee entitlements, such as superannuation, leave or providing training (Hall, Harley & Whitehouse 1998). However, the benefits of outsourcing are also contested. The study by ACIRRT concluded that for every study that showed the advantages of outsourcing, there was a study pointing to its failure or its use actually increasing costs.

As discussed in the introduction, these changes signal an increase in a demand for both contractors as well as for people working on internally contingent working arrangements, such as being 'on-contract' within an organisation (that is, in an employer–employee relationship). It is the former group—people employed as contractors—who are the focus of this study.

The growth of contractors and outsourced workers in Australia is similar to that found in other countries such as the United States of America, where Smith concluded that 'although the precise extent of flexible practices is difficult to measure, there is little doubt that the new [working arrangements] model is pervasive, if unevenly developed across occupational, organizational and industrial settings' (Smith, V 1997, p.319).

Challenges facing contractors responsible for their own work

Contractors responsible for creating and managing their own work face a variety of challenges (Maister 2000). These may be specific to this form of working arrangement, or, as the literature indicates, may be generic to many people working in contemporary work environments (see for example, Waterhouse, Wilson & Ewer 1999; Barratt-Pugh 1998; Moy 1999). Contractors are required to:

- manage relationships, situated within a variety of organisational cultures and market contexts (Gordon and Walsh 1997; State Training Board of Victoria 1999)
- apply their knowledge across differing organisational processes, strategies and cultures (Caroli 1998)

- be responsible for their own development and so be prepared to actively seek feedback (Allen & Sienko 1998; Harris & Greising 1998) from a range of sources and to manage this development (Comfort 1997; Doyle, Kerr & Kurth 1999; Kerka 1997)

Each of these challenges and what can be inferred about the knowledge, skills and attitudes needed by people operating in this context are outlined below.

Managing relationships and reading the market

Workers responsible for creating and managing their own work, do so within and across a variety of organisations. Each of these organisations has its own culture, processes, networks and expectations of contractors. The nature of the relationships in contractors' work is likely to be influenced by:

- the reporting mechanisms in place governing the work (Boyd & Browning 1998; State Training Board of Victoria 1999)
- the nature of the client's need (State Training Board of Victoria 1999)
- the degree of mutual interest (State Training Board of Victoria 1999)
- potential sources of conflict and tension that may arise due to complexities of differing practices and demands of hiring companies (Smith 1994)
- the degree of formal contractual arrangements including the flow of information and general communication mechanisms (Boyd & Browning 1998; Gordon & Walsh 1997)
- the opportunities for developing relationships through networking (Granovetter 1973; Mizruchi & Galaskiewicz 1993)

The State Training Board of Victoria (1999), in its report, *Understanding balanced partnerships,* emphasises the importance of actively building such partnerships. The authors analysed examples of success and failure by interviewing VET providers (TAFE colleges and private providers) and their clients or hiring organisation and mapped a range of relationships between providers and clients. While the report recognised that 'balanced partnerships' were more of an ideal than a reality, it concluded that such partnerships are generally built over time, and involve more and more transactions. A relationship was classified as a partnership when the mutual contribution and the complementary skills of the parties were features. According to the report, as such relationships develop, they are often a relationship between individuals, rather than an institutional relationship (State Training Board of Victoria 1999, p.1). The report emphasises that meeting the mutual needs of both parties is necessary if a balanced partnership is to lead to a successful outcome.

> *To build long-term balanced partnerships, it is essential to understand the outcomes that both parties are working towards in their strategic context … The client needs to understand its own strategic context and outcomes (not always a foregone conclusion). The provider also needs to understand these, and how to work towards them.*
>
> (State Training Board of Victoria 1999, p.18.)

In a similar study, Boyd and Browning (1998) give an account of partnering based on experience in local government. They emphasised the importance of trust in building effective working relationships rather than a 'contract culture' of adversarial approaches and litigation.

This literature highlights the importance for contractors to be able to build trust, to identify client need and the potential intersections between client and provider interest, as well as to understand contracts so that successful outcomes are met. Sometimes successful outcomes are influenced by personal as well as structural tensions that are built into the working arrangements.

As discussed, contracting-out is often used by organisations to access a broader base of knowledge and experience than the organisation may possess internally (Gordon & Walsh 1997). However, goals are not always aligned and this can lead to a source of tension. Drawing on experience in writing and managing contracts for schools, Finkel (1998) emphasised the importance of being clear about roles and expectations. In his discussion of

contingent work, Cappelli (1997) points out the tensions inherent in these new work systems. One the one hand, these new work systems depend on loyalty, best practice and innovation (which in turn depend on job security); yet, on the other hand, they encourage workers to focus on their immediate self-interest, rather than build trust on the expectation of long-term relationships. As a consequence, tension is built into the structures governing working arrangements.

Smith (1994) also refers to sources of tension in relationships that contractors (or what she calls 'externalised contingent workers') need to manage. 'Where "enabled" or permanent workers work alongside "restricted" or contingent workers there are consequences for conflict and organisation of control' (Smith, V 1994, p.296). This is the case if permanent workers feel threatened by contractors, who may be employed for more or less money and conditions than their permanent counterparts. Similarly, contractors may recognise their disadvantage by comparison to those more permanently employed. When services are delivered across inter-organisational boundaries and facilities, contractors can become enmeshed in the practices and demands of the contracting company. Thus new inter-organisational complexities are created and must be managed.

It is also necessary for both parties to be able to 'read' the market successfully in order to have a successful long-term relationship. To work towards building a partnership, contractors need strategic skills to:

- assess needs
- understand and articulate outcomes and assess progress against them
- constantly build 'intellectual capital' (State Training Board of Victoria 1999) in order to be able to respond to the market
- develop organisational solutions and nurture and manage relationships

In order to operate successfully in a range of contexts, contractors need to be able to draw on and apply flexibly, the knowledge of the context, the market and the individuals involved. This can require 'novel problem solving and transfer across settings' (Mulcahy & James 1999, p.21).

Applying knowledge across organisations and contexts

Mulcahy and James (1999) argue that the capacity to deal effectively with changing environments requires strategic competence (p.18). It is contended that the competencies and skills required in these work contexts are also the competencies required by contractors.

Others (Cappelli 1997; Manfred 1995) also support the changing requirements of knowledge and skills. Cappelli (1997) indicates that, as a result of the changing work environment and raised skills requirements, all individuals, not just high-performance, high-skill workers, now require the competencies and qualities previously associated with 'more highly educated individuals' (p.165). The European Centre for the Development of Vocational Training (CEDEFOP) notes that it is expected that more holistic, self-reliant workers and greater responsibilities for workers will require broad, transferable and flexible skills (Manfred 1995). Smith and Marsiske (1997 cited in Moy 1999) identify three criteria as 'important in job performance':

- the amount of knowledge (verbal knowledge on technical details, procedural and strategic knowledge and practical knowledge)
- the level and nature of knowledge organisation (representation of problems, information access and storage)
- metacognitive strategies (knowledge about managing oneself and others, insight into one's capabilities and limits) and application of this insight to on-the-job performance (p.12)

As Moy (1999) outlined, such competencies are necessary for environments requiring 'flexibility, adaptability and responsiveness' (p.12), features already demonstrated to be important in contractor work. Similar findings have also been reported in the United States,

where the Secretary's Commission on Achieving Necessary Skills (SCANS) (1991 cited in Moy 1999, pp.10–11) reported on a similar set of personal qualities required to succeed in high-performance workplaces, characterised by high-skill, high-wage employment.

The SCANS report found that school leavers and workers required:

- a solid three-part foundation, or 'fundamental skills' comprising: basic literacy and computational skills; thinking skills (including creative thinking, decision-making, problem-solving, learning to learn and reasoning); and personal qualities (responsibility, self-esteem, sociability, self-management and integrity/honesty)
- five 'workplace competencies': the ability to manage resources; to work amicably and productively with others; to acquire and use information; to master complex systems; and to work with a variety of technologies

Hobart (1999) discusses the requirement for both hard (technical) and soft (interpersonal and communication) skills. Managing information, resources, and relationships with people as well as self-management are some of the skills referred to. Hobart adds that 'global' workers need flexibility, problem-solving and decision-making ability, adaptability, creative thinking, self-motivation, and the capacity for reflection (p.42), and goes on to note that:

> *people with global mindsets have the ability to look at the broader context, accept contradiction and ambiguity, trust processes rather than structure, value diversity and teamwork, view change as opportunity, and strive for continuous self-development.* (Hobart 1999, p.43)

The issue of generic competencies and how they are addressed within the Australian VET system is discussed later in this chapter. How workers gain such skills often occurs informally (Mulcahy & James 1999) and these processes, and their importance to contractors, will now be outlined.

Feedback, reflection and self-development

Acquiring knowledge, skills and attitudes occurs formally in VET programs and informally through everyday practice. As discussed, there is a tendency for 'soft' or generic skills to be acquired informally in particular contexts. Such learning processes require reflection on experience, the capacity to abstract from those experiences to other contexts as well as the capacity to act as a result of reflection and feedback. Thus the impetus for learning, in this example, is the recognition of a gap in expertise and realising the implications of not filling it. Contractors are more likely to obtain feedback related to job performance from specific events, rather than from the verbal or written statements typically associated with employee-related performance management and review sessions. According to Harris and Greising (1998), such feedback is also likely to be more indirect. In the case of contractors, feedback will include a contracting body referring the worker to other jobs, choosing the worker for projects over his or her competitors, and offering additional work.

From this review of the literature of the challenges facing contractors, a number of indicators for people working under these conditions can be identified. Contractors need to:

- manage multiple relationships, and build trust
- understand the legal and administrative aspects of contracts
- have a high degree of interpersonal skills and be able to manage expectations
- be able to identify the client's needs
- be able to identify how workers can advance the value of their own knowledge, skills and attitudes base
- keep up to date with their technical knowledge and skills
- utilise a range of strategies to acquire and use information, understand complex and contradictory systems and to 'read' individuals, organisations and markets

- have a range of generic competencies which includes communication, strategic thinking and self-awareness
- utilise metacognitive skills to be able to reflect critically and to use multiple methods of gaining feedback on performance

One of the key interests of this study is how existing VET structures are assisting individuals to acquire and maintain these attributes. As discussed, literature on VET and its links to the population under study is limited, so a brief review will be outlined.

The roles and responsiveness of VET

What are the implications outlined above of the changes in working arrangements for the vocational education and training system? The need for VET to respond to changes in industry requirements and to develop the workforce skills required by new and emerging industries is well recognised (see for example, ANTA 1999; Doyle, Kerr & Kurth 1998; State Training Board of Victoria 1999). One key argument is that new organisational forms and working arrangements demand new knowledge, skills and attitudes different from those derived from traditional conceptions of work. It follows, then, that such skill formation processes also need to be supported by vocational education and training systems that have moved beyond a reliance on previous traditional conceptions of work (Berryman 1993). A number of reforms to the VET system have been introduced in recent years to meet the changes described. These include:

- the implementation of a market approach to VET
- emphasising the workplace as the principal site for VET
- delivering VET through strategies associated with competency-based training (CBT)

Have the changes introduced into the VET system in recent years appropriately anticipated the demands created as a result of these work organisation changes and what are the areas that remain problematic? The rest of this section will discuss the main features of these reforms in the context of these questions.

The implementation of a market approach to VET

In the late 1980s there was a radical shift from the traditional provision of VET programs in Australia. As part of the aim to increase the efficiency, flexibility, quality and responsiveness of VET, the government promoted the development of a competitive training market within the VET sector, a sector which until the late 1980s operated largely under non-market conditions (Anderson 1997). The policies and practices associated with this shift have far-reaching implications and, as a consequence, have sparked considerable debate. Supporters for developing a market approach (for example, Robinson 1998) argue that the outcome will be a more efficient and effective VET system. Others (for example, Anderson 1997) argue that, given the government's publicly funded VET programs of market reform, giving precedence to the needs of industry can neither be sustained nor justified. According to research conducted by the National Centre for Vocational Education Research (NCVER):

> *Research into training markets in Australia has been more about 'personal ideological positions on competition and market reform in the VET sector than objective analysis of relevant trends and developments'. There is currently insufficient empirical evidence to either support or refute claims that increased competition will produce the benefits being claimed by proponents or the severe drawbacks being speculated upon by opponents of the training market.*
>
> (NCVER cited in Robinson 1998, p.103)

Allen Consulting Group conducted some early analysis of VET markets in Australia for the Australian National Training Authority (ANTA) in 1994. Their findings identified five areas of poor performance in Australian training markets:

- On the demand side the initial issue is to encourage demand between enterprises and student individuals who feel that the return on their investment in training is worthwhile.
- On the supply side there is limited knowledge about the supply of training and how well it matches demand.
- The market is not accessible to all, especially small businesses.
- Governments are sending mixed signals in setting the rules under which the market will operate.
- Information to consumers about training products and how to distinguish them in terms of price, quality and service is poor.
- The implications of this are that a clear definition of VET products and greater consumer awareness and product knowledge amongst enterprises and individuals is fundamental to the effective operation of VET markets (Allen Consulting Group 1994, pp.40–1).

It appears that these problems with market reform have not yet been resolved. In a recent study examining the question of how well the training market is meeting the needs of employers grappling with the challenges associated with globalisation, Hall et al. (2000) presented findings of case studies on two industries in New South Wales. One was a mature industry (metals and engineering) and the other an emerging knowledge-based industry (information technology). From the data collected they found that for both industries:

- Employers failed to make an adequate commitment to training investment and skills development within the workforce.
- Employers lacked knowledge about the amount and type of training they required; the competency-based training and assessment reforms; the operation of the new training packages; the means by which group training companies, networks and co-operative schemes can be used to assist in supporting training.
- There was a tendency for employers to attempt to recruit already skilled workers, or buy in skills from labour hire firms, rather than to take on trainees, or train and develop the skills of existing or new employees.

According to Hall et al. (2000), although competency-based training and assessment and the new packaging arrangements for training held much promise of significant improvements in the delivery of and use of VET in Australia, within their case-study sites these reforms had not been realised. The study concluded that emerging training markets in both these industries were not responding to the challenges companies face in grappling with globalisation. 'Many of the reforms surrounding the push to an "industry training market" assume that price is capable of providing an adequate and efficient coordinating mechanism. This study reveals that too much is expected of this mechanism' (Hall et al. 2000, p.xi). The authors suggest that price can play a role, although it needs to be supported by a range of more dynamic and effective mechanisms. Successful mechanisms tend to be regional and industry-specific and involve the active participation of firms in a network or co-operative arrangement, enabling the training needs and burdens to be shared among firms (Hall et al. 2000). These conclusions also draw attention to the danger of viewing VET policy in isolation. The VET system is but one component within institutions and processes all aimed at enhancing Australia's social and economic wellbeing and therefore needs to be evaluated in the context of a range of other reforms.

The implications of these findings are profound. In an environment where knowledge rapidly changes, these difficulties are likely to be further exacerbated. At issue is the degree of information flow between governments, organisations, firms and VET providers. The finding that employers may be failing to invest in the workforce adequately and be attempting to recruit already skilled workers is particularly problematic. This is especially so when considered together with other studies. VandenHeuvel and Wooden (1999), for example, have

found that employers tend to provide less training for contingent workers than for their permanent full-time counterparts.

Although no literature on VET provision for people employed as contractors could be found, other recent research with a related population (internalised contingent workers such as casuals) has been undertaken by VandenHeuvel and Wooden (1999). They examined a number of different data sources to determine the level of training occurring within casual employment. They found that while permanent employees were more than twice as likely to have engaged in in-house training than casual staff, casual employees were more likely to have participated in external training without employer support. VandenHeuval and Wooden also investigated whether the level of training undertaken by firms was influenced by the increased use of outsourcing. They concluded that:

> *despite concern that firms may substitute the use of contractors for in-house training activities, no evidence was found to indicate that the use of contractors was related to a decline in the level of training activity for employees. Indeed, if anything, analyses of various data sources indicate that employees in firms, which made greater use of outsourced labour, were more likely to have participated in training. The strength of this association, however, was (in statistical terms) quite weak.* (VandenHeuval & Wooden 1999, p.3)

As discussed, contractors will sometimes be identified as self-employed. Curtain (1996) noted that the education level of self-employed people is relatively low. For example, self-employed people are more likely to leave school at an earlier age, with most post-school qualifications being at the level of a trade certificate. Furthermore, people who own their own small and micro-businesses are not making use of the existing VET structure (Gibb 1997) and this will be further discussed below.

The VET client

One advantage of conceptualising VET as a market is that it does provide mechanisms for examining more fully the client base for VET products. In the initial phases of these most recent reforms, industry—often interpreted as big business—was regarded as the primary client of the VET system (Anderson 1997). Indeed 'who counts' as the key client has generated considerable disagreement under a user-choice market-driven system (Selby-Smith & Ferrier 1996). This issue is important in this review because of the implications for access and availability of types of VET services.

Some research suggests that while large employer groups have gained much from VET market reform (Balzary 1998), small business has not fared as well. Given the rise of small business and that frequently contractors are identifiable as small business operators, this issue is of concern. There is evidence to suggest that small business operators are not convinced that the existing VET system has anything to offer their needs (Gibb 1997). Much of the literature on small businesses and training suggests that small business does not participate in the VET system but relies instead on informal training (Field 1998; Gibb 1997; Kilpatrick & Crowley 1999). Gibb suggests that small business lacks the conviction that training (that is, formal VET) is useful. Reasons why small business may be resistant to training, and the consequent failure of training providers to meet its needs, are that training programs are too general and not targetted to small business needs. Time, quality and cost are also issues of concern for small business (Gibb 1997, p.18). Gibb suggests that one way of better meeting the needs of small business clients is to tailor programs according to their stage of development. This means that businesses would be targetted depending on their years of operation. For example, VET programs for businesses less than three years old would be differentiated from others aimed at 'second-stage businesses' which are entering new markets (p.20).

By contrast to an industry or business focus, Anderson (1997) argues that individuals are the major clients and their reasons for taking VET courses do not always relate to employment outcomes. According to Anderson, participants in the VET system numbered 1.35 million in 1998 and should therefore be considered the major stakeholder. However, this is also an underestimate of how large the client base could be. Research (for example, Butler & Lawrence 1996) into access and equity issues in VET also identifies a number of population

groups who are currently under-represented in the VET system. These studies show that participation in VET is neither equal for individuals nor equally accessible.

Several studies (for example, ANTA 1999; Pattison 1998) have examined who participates in VET and have analysed this in terms of market segmentation. A recent study exploring attitudes to learning (ANTA 1999) surveyed 3866 members of the community. The study identified four core attitudinal groups: those who love to learn (23%); those who learn to earn (31%); those who value learning but, due to barriers, are not involved in participation (22%); and those who believe learning is not important (15%). It would be interesting to explore in future research whether these attitudinal patterns are concentrated in certain categories of working arrangements more than others. There is another side to the emphasis on enterprise demand as the key driver for VET. Burke (1998) concludes that, in an economy where more people will need training, it may be difficult to sustain participation in workplace training, given current trends in employment and unemployment. Burke concludes that 'increased attention has to be given to sustaining individual demand for training by the growing numbers who are not in large firms or in full-time employment' (1998, pp.208–21). In other words, VET providers may need to become more responsive to individual demands than to enterprise clients if the demand for VET qualifications is to be sustained in the current economic context (Anderson 1997). Consideration of who the VET client is has considerable repercussions for resource allocation, access to and availability of training and learning, modes of delivery and content as well as the perspective from which training needs are analysed.

VET in the workplace

The emphasis on the workplace as the key site for VET delivery has both advantages and disadvantages. On the one hand, for those workplaces where work has become more intense and conceptually demanding, it becomes increasingly difficult to learn skills in decontextualised or simulated conditions (Billett 1998). The advantage of locating VET within a workplace context is that it enables individuals to apply their training directly in the context of the job at hand. However, such environments can also be a disadvantage. Most often what is being learned are the skills needed immediately. While it is important to fulfill this gap, it is not a useful practice in terms of anticipating future or unmet skills needs in rapidly changing environments. Often workplaces are not set up to incorporate learning and training. The study by Hall et al. (2000) reported on earlier in this section also found that workplaces were generally poorly prepared to accommodate a workplace training focus, which was an integral feature of the new training packages.

Moreover, workplace training raises the issue of workplace assessment and who is competent to assess the training taking place. In a survey of 23 peak industry bodies, which included employer bodies, unions and industry training advisory boards, the rigorousness of workplace assessment (and its moderation) has been identified as a key concern (Owen & Bound 1998). How do people who operate as contractors—often operating as sole traders even if in an alliance—make use of such VET arrangements? Where do they find appropriate work experiences and assessors even if they are motivated to do so? What barriers to the desired training do this population group face? These are issues that deserve attention in future VET research.

As has already been discussed, the kinds of jobs people are training for are also in a state of flux. Indeed, in his discussion of the formal delivery of VET, Hobart (1999) states that 'one of the most significant impacts that globalisation has on the curriculum is the need to develop in the learner the knowledge and skills for "employability" as well as for "employment" '(p.41). This is particularly the case for contractors since employment for them is short-term and the asset likely to get them their next job will be their 'employability'.

Hobart (1999) adds that the new competitive framework requires a broader set of skills, with both hard (technical) and soft (interpersonal and communication) skills to be viewed as equally important. VET systems may no longer be assisting people to get clearly defined jobs as we know them, but they may be required to assist individuals to develop a portfolio of

skills with an emphasis on teamwork, communication and rapid learning. In recognition of the changing structure of the workforce, Doyle, Kerr and Kurth (1999) refer to the need to build a portfolio of knowledge, skills and attitudes 'that will probably fit a succession of jobs rather than just one' (p.6). In this context, particularly for contractors, although also for people engaged in other working arrangements, the role of transferring knowledge and competencies across settings becomes particularly important.

Competency-based training and contractor working arrangements

The fit between using curriculum strategies such as competency-based training and the skills and knowledge required by today's workforce has been discussed by a number of authors (for example, Billett 1998; Graham 1998; Moy 1999; Mulcahy & James 1999). For Billett (1998), there is a tension within CBT's focus on outcomes rather than on processes in its attempts to deliver outcomes associated with adaptability and flexibility.

> *There is limited evidence that CBT itself is directly associated with the development of a skilful and adaptable workforce… The key antagonism between CBT and the development of adaptability and flexibility is vested in CBT's focus on outcomes, rather than process… the orientation employed for developing the educational intents denied the very thinking and acting which determined performance. The national focus and the means of implementation also misrepresented the complexity of vocational knowledge, its situatedness, the teaching and assessment of that knowledge, and the basis by which teachers commit themselves to their practice.* (Billet 1998, pp.3–4)

Recent research into CBT suggests a:

> *shift in the nature of skills requirements at the enterprise level away from narrow technical skills and towards a new training paradigm that emphasises the need for developing broad sets of generic skills in the workforce in order to increase adaptability.* (Smith 1999, p.115)

Within a knowledge-based economy, greater value is placed on human resources and 'intellectual capital'. In rapidly changing workplaces, continuous training and retraining need to be underpinned by attitudes toward continuous learning. According to researchers and policy-makers examining trends in skill development in the 'new economy', specific technical skills are likely to remain relevant for shorter periods of time (Berryman 1993; Robinson 1998). Implications for the VET system are that it will need to be oriented toward continual skills upgrading as existing skills become obsolete with increasing rapidity. Moreover, the emphasis in some industries for training aimed at immediate job-specific skills (Billett 1998) is likely to be an inadequate basis to sustain future skill formation. This leads many researchers to conclude that generic competencies will increase in importance.

Generic competencies

Generic competencies were first identified as important within the Australian VET system by Finn (1991) and Mayer (1992) and the definitions used for them are included in table 3.

In a study examining generic competencies in the Australian construction industry (an area with a high proportion of contracting as the dominant employment arrangement), Crowley, Garrick and Hager (2000) noted that the skill requirements of construction workers were changing and are underpinned by clusters of the generic competencies. The generic competencies of collecting and analysing information, teamwork, communication and planning and organising activities were evident in construction work of all kinds. However, as in other industries, the construction industry has yet to develop systems and mechanisms for facilitating the optimum transferability and recognition of such skills.

Table 3: Definitions of key competencies

Key competency	Definition
1 Collecting, analysing and organising information	The capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods to obtain it.
2 Communicating ideas and information	The capacity to communicate effectively with others using the range of spoken, written, graphic and other non-verbal means of expression.
3 Planning and organising activities	The capacity to plan and organise one's own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance.
4 Working with others and in teams	The capacity to interact effectively with other people both on a one-to-one basis and in groups, including understanding and responding to the needs of a client and working as a member of a team to achieve a shared goal.
5 Using mathematical ideas and techniques	The capacity to use mathematical ideas, such as numbers and space, and techniques such as estimation and approximation, for practical purposes.
6 Solving problems	The capacity to apply problem-solving strategies in purposeful ways, both in situations where the problem and the desired solution are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome.
7 Using technology	The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems
8 Using cultural understanding[1]	The capacity to effectively apply cultural knowledge and skills in any work-related situation.

Source: Mayer (1992) (Competencies 1–7); NLLIA (1994) (Competency 8)

Some overseas research suggests that the best mix for VET in rapidly changing work contexts are training programs that include a mix of the following categories:

- generic foundation skills development
- industry-specific or occupation-specific skills in response to current needs
- some specific skills development for the future (Moy 1999)

However, research conducted by Mulcahy and James (2000) found that a narrow technical view of competence is still alive and well in some sectors of the workforce. They found that distinctly different discourses of competency are developing in different industry sectors and between different workforce groups. They identified a discourse of competency as 'specific skills for specific jobs' required of operational technical and trade staff and a broad view of competency for staff involved in managerial and professional work. They conclude that two broad models of VET are emerging: a training model, which emphasises competence in specific practices and a developmental model, which emphasises competence in generic practices. Further, there is still a contradiction between what employers say they need and what they demand from CBT.

A further implication arising from the changes outlined earlier relate to the differentiation between individual and teamwork and learning. Rapidly changing work environments rely heavily on teamwork. A review conducted by Waterhouse, Wilson and Ewer (1999) into the changing nature of work and its implications for vocational education and training concluded that, in the new economy, individual competencies may not be the most important outcomes to be training for in a VET system. Given the value placed on the ability of groups of people to work effectively together, more attention needs to be given to the notion of 'collective competence' (p.44). Given that alliances can be regarded as 'temporary teams', the notion of 'collective competence' is particularly relevant to this study. The authors suggest there is a

[1] Although the competency 'cultural understanding' was canvassed, it was never formally adopted. However, it has been included here because of its relevance to this study.

need to identify what group or team competencies might be. Further research is needed to identify what collective competence in action might look like and how it is manifested in various settings. Consideration also needs to be given to the relationships between individual competencies and group or collective performance. Waterhouse, Wilson and Ewer (1999) ask, if social and collective competence is important, what are the implications for teaching strategies based on individualised conceptions of the learner and competence?

Gaps and silences

While the existing research literature provides us with considerable insight into the issues at hand, it is clear that significant gaps remain. What, for example, are the demographic characteristics of the emerging contractor workforce? Evidence suggests that, historically, the typical contractor was male, middle-aged and well qualified, but how might such patterns be changing as these working arrangements become more pervasive? How do contractors grapple with the challenges of managing the variety of relationships and cultures, in an uncertain, short-term and rapidly changing environment? These issues have implications for wellbeing in working life. What are the experiences of contractors' working lives? What strategies are used to apply knowledge and skill across different organisations and contexts? To what degree are generic competencies, particularly those associated with teamwork and collaboration appropriate for this target group? An exploration of these issues in contractor work may shed light on how generic competencies need to be further refined or adapted to effectively mirror the skills, knowledge and attitudes needed in contemporary working life. What issues emerge in terms of training, learning and continuous development for people working as contractors? This question has implications for training in terms of access to workplaces, workplace assessment and the development of existing as well as future skill needs. To what extent are contractors accessing VET and what are their perceptions about its effectiveness?

Some of these important questions are examined, at least in an exploratory way, in this study. Many of the issues are beyond the scope of this research. However, this study will help to further map the terrain requiring future exploration.

Research design

This research investigates the knowledge, skills and attitudes needed by people working in strategic alliances and how and where they develop these proficiencies. What the existing VET structure and arrangements can do to support people working as members of contractor alliances is also discussed. As outlined in the previous chapter, the new working arrangements are emerging as an important component of the labour force and what is known about them is limited. Accordingly, a qualitative research design was chosen so that an understanding of the context of the ways in which people work in contractor alliances, and their learning needs could be identified. This chapter outlines the methods used and the phases involved in the study.

Conducting the research

The qualitative design is based on a case-study approach. Six strategic alliances were selected across three States and across different industries. Case studies were selected in New South Wales, Victoria and Tasmania. Purposeful sampling was used to identify strategic alliances for participation in the research. The criteria developed for including the alliances in the research included:

- identifying people whose predominant source of income was derived from engaging in work as a contractor in alliance with others, following the definition outlined in the first chapter
- including contractor alliances from a mix of industries where the use of contractors is high (for example, construction, information technology), industries where it is lower (for example, health and community services), and industries where it has been growing (for example, business services and education)
- including alliances across three States to provide a range of perspectives

Alliances participating in the research are set out in table 4.

Table 4: Selection of case studies

Industry	State	No. of participants interviewed	
		Contractor alliances	Other stakeholders
Construction	NSW	2	2
Environmental engineering	NSW	2	2
Business services	Tas.	2	2
Community services	Tas.	2	3
Communication & IT	Tas.	2	2
Education & training	Vic.	3	1

A description of the case studies

The summary of the activity of each alliance appears below. It will be evident that there is a diversity of arrangements, of types of activities and number of alliance members.

The Business Services (BS) alliance, operated as a group of six contractors, most of whom had their own registered small business. These included sole operators, and others who employed staff. Some of the businesses were registered and others were not. The alliance worked through a memorandum of understanding (MOU) that they would work together in various combinations as required (and if available) to do the work. The MOU included a clear statement that they would not compete against each other for similar work. The type of service provided by this alliance included the development and/or adaptation of systems, including software and/or hardware to meet clients' office needs. This was done using a range of existing programs, depending on the best fit to meet client needs. Most of their work was gained through word of mouth. The written specifications, established in the agreement between the client organisation and the alliance members, would be developed and formed the basis of the working arrangement. The alliance had operated for some 18 months. Of the six businesses who formed the alliance, two were interviewed. Of the two alliance members who were interviewed, both had known each other through previous work prior to their decision to work as independent contractors (and as part of the alliance).

The two operators included in this study both worked from home and had previously worked together on a contract that linked up the Tasmanian Government intranet sites. This work involved the development of specifications and secure sites and comprised bringing together both project management components, and writing application software.

The building and construction (B&C) alliance consisted of contractors who operated their own small businesses, both of which were registered as partnerships. In one case, the partnership was a husband-and-wife team and in the other, the partnership consisted of two brothers. The two contractors who formed the alliance were interviewed. One alliance member operated as an independent contractor and had multiple clients. The other had operated previously with multiple clients but recently had been receiving contracts from a large housing construction company.

The alliance had been formed two years previously through the contractors' informal contact at a local hotel. Over a beer the contractors would share stories and would offer to help each other out with loans of equipment and sometimes casual labour if a job was urgent or if the labour was 'going spare'. This conferring on the sharing of resources and work had now become a weekly occurrence. At the time of interview both contractors were involved in painting residential houses in new subdivisions being developed on the New South Wales Central Coast.

The community services (CS) alliance consisted of two contractors who had worked together for approximately five years on a number of different projects. The first alliance member was an independent contractor who had operated very successfully on her own for 10 years. She had purchased her own office space and was well known in the industry and was registered as a business. The second alliance member, trading under her own name, combined working arrangements, working as an independent contractor and also worked as a part-time, casual employee of a large institution. Both alliance members were interviewed.

The type of activity being undertaken by this alliance at the time of interview was an evaluation of a community services program under development. They were working on a federal government project into crime prevention, which was being administered at State level. The governing body they were reporting to was a committee comprising State government personnel, local government and relevant community organisations. During the course of this study the alliance members were meeting with committee members and offering assistance and direction on which methodology would produce the best outcomes. The work would involve developing questionnaires, facilitating focus groups, analysing data, preparing a report and advising the committee.

The training (Tr) alliance consisted of contractors from three incorporated companies, each of which had two or three directors. One company employed 11 employees, another one employee, and the third used freelance labour. In all, four contractors were interviewed from the alliance. Contractors one and two had worked together many times over a number of years and had recently involved contractor three for his particular resources and the knowledge and skills he could bring to the work. Prior to their first joint project, contractors one and the two had drawn up a memorandum of understanding as an agreement to work together. Once the first project was successful, they used the project brief as the means of planning and organising their work together, rather than the MOU. Contractors one and two had similar background experience but had diversified into somewhat different specialties, so their skills were complementary. All contractors operated from rented, leased or bought premises.

At the time of interview the work this alliance was involved in developing multimedia training materials for use by providers and individual clients. The project currently being undertaken was the development of a training resource for use by trainers in the transport industry on the safe handling of food. To do this they needed to carry out research to understand what it was that transporters actually did, and develop resources to encourage transporters to meet the legislative requirements for food handling. The work included the development of a video and training workbooks for transporters.

The environmental engineering (EE) alliance consisted of contractors associated with two incorporated companies. One was a sole operator and the other an associate in a company employing 70 people. Both were interviewed. Although the second company had worked with the first company on other projects, the two individual contractors involved had not previously worked together. Both had related, but very different complementary sets of skills and knowledge. The contractors had extensive experience in their fields and had operated at management levels in a number of capacities and had also been responsible for large projects. The work being undertaken at the time of this study involved an environmental investigation of a major engineering project. The sole operator worked from home, the other from the premises of the company.

The project the alliance was working on at the time of interview was to an environmental impact statement on a large underground power cable transporting electricity into the central business district of Sydney. The power cable—involving metre-wide trenches open for a week or more at a time—would traverse a range of land uses and require consultation with a number of agencies and stakeholders. The role of the alliance was to inform the public and deal with approval agencies in relation to the potential environmental impacts of the project—from when the first hole was dug until completion date. The alliance then was to develop a management plan that would help mitigate any environmental impacts occurring from that project.

The communications and information technology (ComIT) alliance was a loose network of creative writers and designers who used and developed information technology materials. All of these workers were sole operators, most (but not all) trading under a registered business name. The group had been operating as an alliance for some 12 months. The alliance members would pass work between each other and work together where the job required additional knowledge and skills and/or extra support. An outcome of this alliance was a regular social gathering over a drink to share stories and offer support and guidance. This practice was instigated because, as 'sole home-office contractors' they missed the socialising that frequently accompanied working as an employee in an office. All knew each other as a result of networking in the industry.

Two members of this alliance were interviewed who, at that time, working together researching and designing a web page for a science and technology public organisation and designed to provide education and information on the organisation's activities. The project was in the middle of the development phase and had a further three months to run. One alliance member undertook the research and editing and the other designed and developed the web page using this information.

More details of the features of the alliances and their work will be described in the next chapter.

Data-gathering processes

Face-to-face interviews of alliance members were conducted. Follow-up contact was also made on 2–3 occasions and interviews conducted to understand the problems and dilemmas alliance members were working through. Interviews were taped and either full or partial transcripts made. Interviews lasted between 30 minutes and two hours.

In addition, one client from each of the alliances was interviewed, as were representatives from other relevant organisations, such as industry training advisory bodies (ITABs) and professional bodies. To identify client organisations alliance members were asked which of their clients they would suggest we invite to participate. Asking alliance members which organisations they belonged to identified relevant professional bodies or industry bodies. As most alliance members were unaware of the relevant ITAB these were identified by accessing the ANTA website and the ITAB websites. These organisations were interviewed to assess in the ways they offered support for independent contractors.

The original research design had made provision for the participation of training providers used by alliances. However as training providers were not used by alliances or alliance members, they were not included as part of the data-gathering process. A VET provider offering VET programs within each industry sector was consulted later in the project to discuss the findings and to identify possible ways in which existing VET structures could be strengthened.

In addition, policy documentation from ITABs, professional and industry bodies was collected and reviewed in terms of the ways in which these support organisations recognise and provide for the needs of the target group. This included a selection of training packages, and VET-related policies of relevant ITABs.

Verification of the research processes

After the initial sets of interviews, alliance members were all provided with a summary of the responses to research questions one, two and three in table form. The tables were used as a tool for dialogue in subsequent conversations about the knowledge, skills and attitudes used, how they were acquired and what might be needed in the future. A further verification process and consultation process occurred with VET stakeholders. Although none of the members of the contractor alliances interviewed were currently using VET providers, providers of VET services that alliance members could use were interviewed. The original research design included an advisory group for consultation and validation purposes. An attempt was made to establish such a working party using electronic communication. When this failed, individual stakeholders (for example, VET providers, representatives of ITABs, policy developers and researchers) were also sought out for feedback and further development of ideas.

Limitations of the study

There is a number of limitations arising from using data from case studies, particularly in an introductory, exploratory study.

Although the sample in the study comprised more tertiary-qualified people than may be found in the typical VET cohort, it did include people who were representative of VET users. This included those who only had VET qualifications, as well as others that undertook tertiary study and then returned to VET. Furthermore, the people interviewed here are those undertaking the kind of work others may do with only a VET qualification. As discussed in the introduction, more and more people are expecting to find work for themselves, so their experiences provide some insights about one aspect of the future of work.

Efforts to generalise about strategic alliance workers and their acquisition of knowledge and the learning processes they use in order to be effective are limited. However, the use of case studies has allowed us to discover meaningful aspects of the ways in which these people work, the problems they confront and their learning. This research has identified issues requiring further exploration of these new working arrangements, about which there is limited Australian literature.

Contractors and their alliances

Introduction

The alliances under investigation consisted of work arrangements between contractors working together for short periods of time. This chapter summarises the characteristics of the contractors studied as well as the ways in which contractors come together to form alliances. It outlines the reasons independent contractors work within alliances and the structures adopted by these alliances.

Table 4 outlines the demographic characteristics of the 14 contractors and their working arrangements. It shows that the individuals interviewed comprised an equal number of women and men who were diverse in terms of their age (from 20s to 60s, with most being in their late thirties and older) and qualifications (from no formal qualifications through to post-graduate degree). This sample contrasts slightly with the descriptions of contractors provided in the literature where they are typically male and older. Although the sample is small and no claim is made in relation to representativeness of the current population of contractors engaging in strategic alliances, the growth and diversification of this sector is such that a study sample inclusive of women and younger contractors is important if we are to understand the needs of emerging alliances as well as existing ones.

The contractors interviewed worked in a number of organisational forms. These ranged from non-formalised business structures (for example, operators trading under their own name), through to arrangements that have some formal business arrangement in place (for example, partnerships with a registered business name), to highly structured business arrangements (for example, an incorporated company). In addition, while most of the contractors did not employ staff (n=7), five did. In terms of income self-reliance, most of the contractors interviewed drew enough income to support themselves from their contract work, although three contractors relied on other forms of working arrangements to augment their contract income. Interestingly, these arrangements all involved other forms of contingent work (for example, in addition to being contractors, they worked as casuals and as part-time workers). This mix of employment arrangements may indicate the increasing difficulty of simply characterising individuals as being involved in one particular type of working arrangement and points toward the ways in which workers may cobble together fragments of work. The length of time participants have been responsible for their own work ranged from 2 to 3 years to 20 years.

The occupations included in the sample are also diverse and include people involved in professional work, paraprofessional work and trades.

Table 6 shows the number of projects that contractors had which were active at the time of study and summarises reasons why participants chose to work in this way, together with motivations for continuing in such structures. Some commenced contract work as a result of facing redundancy or unemployment, rather than as a conscious choice. In these cases, respondents thought about what they wanted to do with their working life, and what they could do, and sought out contracting work as a stop-gap measure. In other cases, there was a deliberate intention to set up a business and to offer required goods and services.

Table 5: Demographic characteristics of contractors

Alliance member	Age	Gen.	Quals	Structure of contractor arrangement	No. employees	Source of income	Years as cont.
BS 1	50–60	M	Degree	Company	2	Contractor	5
BS 2	40–50	M	Degree	Trades under own name	0	Contractor	2–3
B&C 1	30–40	M	No formal	Trades under own name	0	Contractor	10
B&C 2	30–40	M	Trade qual.	Trades under own name	0	Contractor	12
CS 1	40–50	F	Degree	Company	0	Contractor	10
CS 2	50–60	F	Degree/ honors	Trades under own name	0	Mixed	5
Tr 1-1*	30–40	F	Post Grad.	Company	11	Contractor	3
Tr 1-2*	20–30	M	Degree	Trades under own name	0	Mixed	3
Tr 2#	30–40	F	Degree and Diploma	Company	2	Contractor employee	5
Tr 3	50–60	M	Degree/ short courses	Company	2 + freelance	Contractor	8
EE 1	40–50	M	Dip./degree	Company	0	Contractor	5
EE 2	30–40	F	Degree/ Post Grad.	Company	12	Contractor	4
ComIT 1	30–40	F	Degree	Registered business name	0	Contractor	2–3
ComIT 2	30–40	F	Degree	Registered business name	0	Mixed	20

Notes: * Two respondents were interviewed from this business.

This respondent was the employee working on the project under discussion for the business.

All of the participants could identify advantages in being responsible for finding their own work. Reasons why participants chose to work in this way included their belief that they have a particular product or service to offer and because they enjoy this particular form of work and the benefits it can bring. Advantages to working as a contractor also included a belief in the independence and flexibility that participants believed they had—an independence that was not enjoyed by their salary-earning counterparts. The following quotation illustrates this point.

> *I think some of the aspects which I talked about which I see as being positive included having the freedom to set my own schedule, not having management breathing down my neck, and to me they are positives. These days I run my own consultancy and look for work myself actively and to me that is a challenge which I would never have had if I was employed full-time, and I think that I've got more skills in the area of communicating with a wide variety of people maybe [than] if I was just insulated in a full-time job, I might only be able to communicate with subordinates or people directly managing me.*

Table 6: Motivations for working as a contractor and number of projects

Alliance member*	Reasons for working as a contractor	Number projects
BS 1	Saw opportunity for needed service	5
BS 2	Independence and flexibility	4–5
B&C 1	Unemployed/preferred to work for self	2–3
B&C 2	Independence and flexibility	2–3
CS 1	Independence, variety of work, flexibility	5–6
CS 2	To increase income	2
Tr 1-1	Independence Control of work	4
Tr 1-2	Unemployed/freedom/control over work Meaningful work	3
Tr 2	Job continuity Control of work/freedom	4
Tr 3	Identified demand for services across industries	4–5
EE 1	Redundancy—strategic niche market/enjoyment	16*
EE 2	Flexibility/utilise range of skills	4–5
ComIT 1	Decision to work for self, flexibility	3–4
ComIT 2	Gain recognition of skills, flexibility, variety of work	3–4

Note: * 4–5 are currently active

For these participants, the varied opportunities which contractor work brings enhances their own development of knowledge, skills and attitudes. Participants view working as an independent contractor as having advantages that include greater task variety, independence and control over the work they do. This supports the literature (see Harris & Greising 1998) which hypothesised that those workers would gain most of their job satisfaction from task variety and autonomy. However, there is also a contradiction evident in that participants in fact have quite limited freedom in terms of when and where they work, as illustrated by the next quote:

> *The major disadvantage is that your home life is pervaded by your work life. Your home phone isn't a private phone. It is a work phone. You get up, your desk is there. It is not that far away. It is always there. It is not as if you've just got this wonderful little place where you live and work is outside of it. Work is in there—it is pervading all of the time.*

Participants talked about the difficulties of always being 'on call' for work and of never knowing when they might be able to absent themselves and take recreation leave. Participants also enjoyed few of the working conditions available to wage and salary earners, such as leave entitlements. For example, few had superannuation arrangements in place and only two participated in a long-service leave entitlement program. Interestingly, this was the scheme established within the building and construction industry to provide some benefits to the majority of workers who work as contractors in this industry. Most contractors interviewed had little by way of insurance to cover themselves against unforeseen circumstances and loss of income, leaving their employment wellbeing somewhat vulnerable.

Although participants are able to determine the kind of work they undertake, how much and when, and without having to negotiate with a supervisor or employer, the work environment was often problematic because of fluctuating demand. Participants were beholden to the

market demands for their particular service and this dictated the kinds of conditions they could command. For some, this meant sometimes working without profit, 'just to turn the money over' as the following respondent commented:

> *Yeah it's always a worry with interest rates, the recession and all that sort of stuff, it definitely makes an awful lot of other people out there in the trade be awfully competitive just to turn the money over and that's when it gets awfully cut-throat.*

Participants talked about doing work they did not particularly wish to do, and working when they did not wish to, simply to remain viable and operating within the market. Typically, the number of projects active at any one time varied between two and five (see table 5). In most cases, new work was obtained informally through word of mouth and networking. Few of the projects were publicly advertised. Of those that were, all were government tenders, indicating the influence of government policy on contracting procedures. To try to manage in this short-term, uncertain, turbulent environment of fluctuating demand, participants joined up with other contractors to form alliances. The next section describes the features of the working arrangements individual contractors have with others.

Contractor alliances

This section looks at the ways independent contractors came together to form an alliance. The structure of alliances and the reasons for forming alliances are discussed, as are the ways of working together that lead to the development of successful contractor alliances.

The structure of contractor alliances

The formal structures underpinning contractor alliances varied. Sometimes the alliance was based on a very loose agreement resting on a handshake between members (for example, the building and construction alliance). In another case (the community services alliance) the arrangement was developed over a number of conversations aimed at establishing mutual interest and complementary skills. In other cases, the arrangement may be more formalised by, for example, a memorandum of understanding (for example, the business services alliance and, initially, between members of the training alliance).

In some cases the particular contract or tender requirements dictated the formality needed in the structure of the contractor alliance. Contracting organisations, for example, often require a principal—one organisation fully accountable and answerable for the work to be done. Consequently some of the alliances (for example, environmental engineering and training) would take it in turns to be the principal party, but the work and the income would be shared equally.

These formal arrangements form a context to the constant communication between alliance members to keep up with progress on the work, and thus the building of shared understandings as the work progressed and the number of joint projects increased.

> *Yep, well I think what happens—I think it evolved. I think the first time it was a bit more watching over each other's shoulder I guess to make sure everything was being done but I think now there is an understanding of each other's responsibilities, we sort of talk about it overall, we get together and obviously discuss the project as a whole.*

Reasons for developing alliances

Reasons for forming alliances varied but generally alliances were created in response to the ebb and flow of market demand, and the related goals of increasing market coverage and adding depth of services and products offered to clients. Within the six case studies, the major reason alliances formed included:

- increasing the range of skills and expertise

- creating opportunities for work
- sharing the load

Table 7 outlines the major reasons each alliance member gave for participating in an alliance. The contractor alliances investigated were all formed in response to the demand for greater breadth and depth of expertise than was offered by an independent contractor. The life-span of those working together in an alliance varied from less than one year to six years.

Table 7: Structure and duration of alliance

Alliance	Structure of alliance membership	Duration of alliance
BS Alliance	Memorandum of understanding; work is structured and distributed through the development of specifications	18 months
B&C Alliance	Informal; work is dictated by industry demands	2 years
CS Alliance	Informal; work is structured and distributed based on the brief/contract	5 years
Tr Alliance	Initially a MOU between alliance members; thereafter all work bound by the proposal or brief	5 years
EE Alliance	Informal; work is bound by the brief/contract	2–3 yrs between the companies (but individuals new acquaintances)
Com IT Alliance	Informal; work is bound by the brief/contract	2–3 years

These alliances came together for the life of the work undertaken, after which individuals moved back to working as independent contractors. In some cases contractors were also involved in other alliances that ran parallel to those under investigation. In forming an alliance, members would typically meet through other work or contacts and, based on an understanding of the strengths and attributes each member could bring to a job, actively seek work together. The following respondent illustrates this:

> *I'd been chatting to another provider [name], and [name] was always saying 'We should do a project together' and I was saying, 'Yes we should'. So after I finished that project I went to her and said, 'Well here is an area that I really think needs to be looked at'... So she thought that was a good idea. We got together and we went and spoke with [potential contracting organisation] and we got those people involved and we decided to put together a project.*

These comments support the roles networking and developing relationships play for individuals working collectively. Working collectively contributes to a greater continuity of working life than might otherwise be the case. Seeking to work collectively with another is generally based on an understanding of that person's skills, the quality of their work and the credibility they have within their particular field of practice. Sometimes one member of the alliance may have a job on offer, or be looking to tender competitively for work. In these cases the member looked for others with complementary skills to add value to the contract/job proposal. Networking (Granovetter 1973; Mizruchi & Galaskiewicz 1993) was an important component of the ways alliance members found out about each other, referred work to one another, and kept in touch with job opportunities.

When alliance members worked together it was as an informal partnership. Individual contractors often spoke of being happy to team up with another contractor as partner, rather than having the burden of employing someone.

Given the loose coupling of alliances, the combinations of relationships between contractor alliance members can be complex and extensive. For example, four members of an alliance may be working on one particular project (for example, M1, M2, M3, M4), and each member

may be working on other projects with some of the members of this group (for example, M1 + M3). Others may work on other jobs alone, or may be working in partnership with another individual or group (for example, M2 + Mx).

Once a successful alliance was established, members often sought to enjoy a continuity of experience by then actively looking out for work that could be undertaken collectively. Ways of looking out for work include referring work to an alliance member, suggesting alliance members to a contracting organisation, jointly applying for funding, identifying a need for further work from a current project and being referred on by networks external to the alliance.

Table 8: Reasons for being in the alliance

Alliance	Reasons for being in the alliance	Modes of communication
BS 1	To generate work in a small market To bring in skills required for the tender	Face to face; meetings; email; telephone; fax
BS 2	To network for new work To bring in skills required for the tender	
B&C 1	Industry structured in this way	Face-to-face; telephone
B&C 2	Industry structured in this way	
CS 1	To bring in skills required for the tender To gain competitive advantage	Face-to-face; email; telephone
CS 2	To gain competitive advantage	
Tr 1	To gain competitive advantage To develop skills in related field	Face-to-face; meetings; email; telephone; fax
Tr 2	To help with workload To build skills	
Tr 3	To gain competitive advantage To reach more industries	
EE 1	To gain competitive advantage To bring in skills required for tender To gain access to equipment, resources	Face-to-face; meetings; email; telephone; fax
EE 2	To gain competitive advantage To bring in skills required for tender Share in the credibility of the member with contracting organisation	
ComIT 1	To gain competitive advantage To support each other	Face-to-face; email; telephone
ComIT 2	To bring in skills required for tender	

Ways of working in an alliance

The structure and values of an alliance were shaped by their reasons for coming together. For example, the business services alliance referred to below was formed specifically to enhance market opportunities. This was the alliance governed by the MOU. It operated with a director at their hub with clearly articulated principles for operating within the alliance.

> *Right at the beginning I approached various members and discussed with them the concept of enhancing all of our opportunities. By having this extra avenue to the market, which doesn't impinge on your existing business and I'm not trying to take anything away from what somebody's already got. You've got to share it around. If somebody's got work and they want to deal with somebody outside the group then they are quite entitled to do that, so it's worked. I think the fact that it's reasonably, reasonably comfortable, people can do their business. It works for the whole thing.*

While being in an alliance had obvious benefits, it was also frequently reported that it is much easier to work as an independent contractor than in an alliance. The reasons for this appeared to be the increased time required making decisions, and the necessity of working through decisions with others. Nevertheless, the advantages far outweighed the disadvantages as the following respondent tells us, pointing out the necessity for excellent communication skills.

> *[You require] really good communication skills and an understanding you are working as a team and not as an individual organisation, and it is a different way of working. When you are working with an alliance there are maybe three or four people where the buck stops, suddenly they've got to find a way to communicate effectively to get to a shared position. And that is hard work. That takes really good communication skills. There has to be a really good use of negotiation, lots of negotiation skills, as you said 'no room for egos'. No room for egos that 'I do it better because I always do it better so therefore I am … ' that sort of stuff doesn't exist. You can't have that. There has to be room for compromise and an understanding that you all come from slightly different sort of value sets. And understanding that their values or their way of looking will be slightly different from yours and how can we negotiate a common ground and that means sitting down and talking about what you all do, where you are coming from. It's not an easy task, it is easy to work on your own with your own organisation, a lot easier cause you just make the decision and get on with it. This way you've got to make decisions and ask somebody else do they agree and, if they don't, modify it and it can take a little bit longer. But it is worthwhile because you learn from each other and you do get lots of expertise and it shares the burden as well.*

Communication and developing an effective working relationship are central to the success of alliances, and are critical if contractors are to repeatedly work together. Frequent (honest) communication increases trust levels. Building relationships is a process of developing rapport, increasing understanding of each other's values and developing shared values. As alliance members are all familiar with common experiences such as varying workloads, meeting deadlines and managing multiple projects (these components of knowledge, skills and attitudes will be discussed in the next chapter), there is an implicit understanding of the pressures each alliance member works under. As one respondent said, 'everybody respects what pressures other people are under because they are in the same boat'.

In the planning stages of the work, alliance members meet often to develop their shared understanding of the project. The intensity of the communication varied according to what was occurring at any given time and also depended on the nature of the work involved. The nature and complexity of the work undertaken determined the size of the alliance and the means by which alliance members needed to keep in touch with one another. The nature and complexity of the work also influenced the modes of communication used by alliance members (see table 8). These included informally meeting face to face, formal meetings, email, telephone and fax.

Trust in alliances is based on experiential knowledge that each partner could deliver what they said they could deliver, and information shared about the way each company does business. Communication and collaboration are key processes for contractors working in an alliance. Within alliances, knowledge is dispersed, decision-making is shared and there is frequent dialogue. Sense-making is a process where contractors utilise their shared technical and professional knowledge assisted by a variety of tools, including shared means of communication. All of this is managed within the tensions created by competing and collaborating in the same market.

Working and learning in contractor alliances

This chapter addresses the research questions relating to the knowledge, skills and attitudes needed for contractors to work effectively as contractors and alliance workers as well as the issues of how and where this learning takes place.

Knowledge, skills and attitudes needed to operate effectively

Knowledge, skills and attitudes in-use or in-need?

The knowledge, skills and attitudes required to operate successfully as a member of a contractor alliance can be divided into those attributes they currently have and use, and those they feel they don't have but need. These attributes have been derived either from interviews with the participants or from interviews with stakeholders, such as client organisations. Most of the material reported in this study relates to the attributes people use to operate successfully and therefore represents the knowledge, skills and attitudes respondents believe they had and used. Explicit questions such as 'what knowledge, skills and attitudes do you feel you don't have but need to operate successfully in the future'? were put to respondents. However, little data was gleaned from the respondents, apart from some general somewhat vague responses. Respondents appeared to want course material highly specific to their needs at a required time as well as material that would serve future needs. This indicated to us that respondents were thinking about their future needs, but not in terms of specific knowledge and skills. This might include, for example, accounting, writing a specific type of report, or learning how to operate a computer software package. More general knowledge, skills and attitudes were also required, such as perceiving opportunities for new work and the ability to develop and move on from what was being done previously.

The reason for this can be found in the context in which these respondents operate—an uncertain and rapidly changing environment. Questions such as the one above assume a stable environment and that respondents are fully aware of the trajectory they are on. The uncertainty of the environment means that respondents do not know what knowledge and skills they might need—until they are needed. What respondents did speak of was the importance of the timing of skill acquisition—needing those skills just in time when they recognised a deficiency. This has implications for VET delivery and will be discussed in the next chapter. The condition of uncertainty referred to does not undermine the importance of the responses obtained. We contend that these are the attributes respondents have used to be successful and therefore will be needed by others hoping to work in this way in the future.

The data can be described within four categories:

- the technical/specialist knowledge they have (their job content knowledge)
- the management skills required by people responsible for their own work
- the ability to work effectively with others
- the capacity for self-awareness and skills related to learning and development

Table 9 shows the knowledge, skills and attitudes required by contractors to work effectively across the range of relationships pertinent to this study. The table summarises the categories listed above for working as a contractor, working with a contracting organisation, commonly referred to in the data as 'the client', and working within a contractor alliance. The arrows in table 9 indicate the intersections and linkages across the range of relationships pertinent to

this study and the types of knowledge and skills identified. In reading the table, it should be noted that all the knowledge, skills and attitudes required to work as a contractor are also required for working in an alliance and for relating to the client. What working in an alliance typically adds is an increased degree of difficulty, or layer of negotiation, to each of the sets of knowledge, skills and attitudes needed within each of the categories. For example, while technical or specialist knowledge and skill represent the core of the contractor's work, an understanding that this expertise may need to be modified and applied to suit particular client needs is essential. Content may also need to be considered and conveyed to other alliance members so that complementarity and divergence of content expertise within the alliance can be identified. So, as an individual, the contractor needs to be constantly assessing and developing his/her specific job content and considering what further skills development will be needed in the future. This knowledge and skill needs to be conveyed to the client and modified, if necessary, to adapt to the client's need (represented by the two way arrows). Similarly, individual contractors, in conjunction with other alliance members, need to identify specific job content strengths and gaps to enhance their value to clients. Likewise, the skills/knowledge under the category 'self-awareness/learning to learn' (including self-efficacy, motivation etc.) are needed for individuals to complete their work and also come into play when dealing with clients and other members of the alliance. Similarly, cultural understanding (that is, self-reflection about '*how am I like/not like this individual or group*?') is needed for individual contractors to enable them to operate successfully as contractors with clients. However, cultural understanding is also needed as a strategy between alliance members so that they continue to negotiate successfully and collaborate in the joint construction of their work.

Technical/specialist knowledge

All the participants in this study had specific knowledge and skills that they brought with them to the job.

> Key finding: All contractors interviewed needed to be proficient in their job-specific technical knowledge and skills, to enable them to value and market that work appropriately and to undertake the work reliably.

Respondents constantly defined and adapted their particular technical/specialist skills and knowledge to the client's demands in a changing environment. This was an important means of developing and maintaining currency of knowledge and skills. Contractors also needed to be able to articulate clearly the nature of the work they undertook and to label and package their expertise, so that they were able to market and value that expertise appropriately. The financial value that contractors put on their own work also needed to be either equivalent to that received by other alliance members or, if costed differently, its value agreed by all alliance members. Where difference in valuing (costing) work occurred, this needed to be resolved successfully and will be discussed later under the 'working with others' category.

> Key finding: Some alliances were formed where contractors had the same technical skills and knowledge, and in these cases the alliance served the purpose of assisting contractors to manage the uneven demands for work. In other cases alliances were based on complementary job-specific knowledge and skills and the alliance served the purpose of expanding opportunities to undertake work.

In some alliances (for example, in the building and constructing alliance), both contractors did the same work and the alliance was used to manage the uneven ebb and flow of the work. In these cases, alliance members shared resources (for example, tools) and labour. In other alliances, or sometimes because of the nature of the job, contractors forming an alliance would do so on the basis of having complementary skills and knowledge.

Table 9: Knowledge, skills and attitudes needed by contractors working in alliances

	Technical specialist expertise	Work management	Working with others	Self awareness/ learning to learn
As a contractor	Development of job content knowledge, now and in future	Self-employment competencies; includes project management and managing time-budgets and contracts Strategic planning	Awareness of others Identification of strategic opportunities with others Rapport/relation-ship building	Self-efficacy Motivation Metacognition Self-monitoring and critical reflection
With contracting org'n/ clients	Strategies to modify technical job content to meet client needs	As above	Above and rapport and trust building	Problem identification and ownership
With contractor alliance	Identification of each other's strengths and weaknesses, points of divergence and complementarity	Communication Logistics Collective management of information and planning Use of tools for distributed workload management	Communication, negotiation, conflict resolution Sharing roles and responsibilities Strategies for shared understanding	Cultural understanding, appreciation of other's perspectives Strategies to enhance individual divergence and complementarity

In the communications IT alliance for example, one contractor would undertake to research the historical background for a project and develop and edit the content and another would undertake the technical design of a web page.

> Key finding: In terms of technical content, alliance members needed the skills to adapt and modify their job-specific knowledge to suit the client's needs and to complement the work of other alliance members.

The utilisation of technical/professional skills by each contractor in an alliance relationship is contingent not just on the complementarity or fit of technical/specialist knowledge and skills, but on each contractor's ability to assess their own strengths and weaknesses in all areas pertinent to the alliance. Having the confidence to know one's strengths and limitations as well as who to call on is as important as identifying who else might be appropriate to work with and with whom to subsequently form an alliance. As discussed in the previous chapter, this gives the added benefits of sharing the workload and, potentially, strengthening the quality of the work.

> *Yes, it becomes second nature, not in a cold-hearted kind of way, but I mean you are constantly assessing and evaluating [what is needed by the client] and translating that into people.*

The process of deciding to work together for the first time requires an evaluation of how well the technical knowledge and skills of each member will support and expand the capability and functionality of the alliance, as well as an assessment of how well members will work together. This latter aspect will be discussed later in this chapter. For an alliance to work successfully, each contractor needs to perform their technical work reliably and to produce a quality product or service so that an attitude of mutual respect develops.

Where alliances work together successfully it appeared to be a common experience to create or look out for opportunities to work together again, creating a climate of mutual benefit. This expanded level of capability and functionality—afforded by combining technical and specialist knowledge with others—is then tailored to the needs of future clients. As one respondent claimed:

> *I always had enough technical knowledge to interpret information given to me which is what a project manager should be able to do but my aptitude is definitely keeping it [the work] moving and understanding the big picture.*

Technical/professional knowledge and skills were therefore used to make sense of the work at hand. In thinking about knowledge and skills they might need for the future, alliance workers spoke of requiring a range of generic skills, such as improving their networking, putting teams together, negotiation, managing projects and people, and improved financial management knowledge and skills.

Key finding: To work effectively in an alliance contractors need to be able to recognise the strengths and limitations of their own technical/specialist skills and knowledge and that of others.

Managing work

Working as a contractor required ways of adapting and managing the uneven ebb and flow of work and managing complementary job tasks with others. Not only is the amount of work unevenly distributed, but stages of work sometimes varied in intensity and this created other demands. Contractors responsible for finding their own work had developed the skills typically associated with managing projects, such as being able to:

- manage time and resources
- analyse the requirements of work and to cost out those jobs appropriately
- recognise how the components of the task fit into a broader picture of work and being able to co-ordinate those respective components
- manage multiple, sometimes competing, tasks
- manage finances generally and cash flow specifically

Key finding: Contractor alliance members used a range of skills associated with managing the work.

Sometimes this resulted in working intensely to complete a job under pressure of time, and at other times it meant stretching a job out to suit a client's time schedule. However, at the same time that these processes are being managed, it is also necessary to be looking constantly for new work and to identify potential opportunities. This can often be quite stressful. The intense and energy-consuming process of the nature of the work is illustrated by the respondent below:

R: It's exhausting. It is because you've got to look [down] there at what you are doing and you've got to look out there all the time to see what else is out there.

I: So you need double vision.

R: You do and I think sometimes it is really exhausting. Really tiring.

I: It would also be tiring because there are so many multiple sets of places that you might go so you need to prioritise your work

R: *All the time. Constantly. But you've got to have a balance. Because if you are only looking there [at the current work] you are going to finish that job and there'll be nothing. So it is a real balance.*

> Key finding: Contractor alliance members needed the capacity to be flexible in terms of work demand and to manage an uneven demand for work. Contractors needed to pace themselves in terms of completing current work demands and setting up new jobs.

Networking was critical to success in gaining new work and to managing uneven demand for the work. Both strong and weak ties (Granovetter 1973) were evident in relationships. Strong ties were developed with alliance members and client organisations where repeat work was forthcoming and with others where opportunities for working together were actively sought out and acted upon. Weak ties were also important in bringing the contractor into contact with a wide variety of potential alliance members and clients. So effective was this process for many respondents that most work was gained through word of mouth:

The work that I find myself is mainly through word of mouth. I do one job and then the manager, employer or boss will say I know this person who you should go and talk to. Three out of four times the person I go and talk to won't lead to a sale, but one out of four will and that sort of leads onto another four potential contacts and one of them will.

> Key finding: Contractor alliance members need well-developed networking skills.

Having obtained the work it is necessary to assess client needs and to determine how these needs would, in turn, be managed. A number of respondents described assessing client need as a difficult process as the client sometimes only gave vague clues as to the underlying problem to be addressed, and would instead focus on symptoms of problems. The skill required was in asking key questions, listening carefully and feeding back to the client what had been understood, and then managing the client's expectations about what could be achieved. The process was also an ongoing one, and the client relationship may be dependent on the skill of the contractor in gaining an agreed and shared understanding of what is required and what will be delivered.

From the perspective of alliance members, maintaining and developing the relationship with the client also requires the alliance to continuously assess client need, educate the client and to manage requests for additional work outside the agreed budget and time frame. Clients most often engage contractor alliances for their expertise, placing an unspoken requirement on the alliance to guide the client through an agreed service or delivery of a product. The following respondent emphasises the importance of making the work transparent as part of an educational process.

Every client is different, but some clients you've got to spend a lot of time, a lot of time in detail with what you're actually doing, but often that's only for the first job, then the second and third job where you don't have to do it. Like the first job if you've got a client who is suspicious of you, I know that sounds like a funny thing today, but sometimes a client is thinking, 'I think they might have charged me too much money'. They don't know you and you can tell: 'are they going to come up with the goods?' And you spend a lot of time with them, and often there is a group of people and there is just one who is a skeptic, so you will spend a lot of time with that person and you'll actually go through the detail for the first time. You might even get down to hour upon hour, 'well this is what I'm doing.' 'These are the places I'm going'. And as soon as they understand what you're actually doing, it's not so mysterious and suddenly they are comfortable.

Part of this process involves the need to develop an appraisal of the effect on the client organisation or stakeholders of the work being undertaken and to communicate this effectively while relationships with others are being managed.

> Key finding: Successful work management requires skills in identifying client needs, working with clients and managing client expectations.

Sometimes this requires negotiating expectations, not only with the client who has engaged the contractor, but also with the client's colleagues or subordinates. One respondent told a story of an encounter where there were different understandings and unspoken fears on the part of (middle) managers who were crucial to the success of the work:

> *So you can't really guess that that's going to happen, you can only go by the person who is going to pay the invoice, what they want. If these other two people are there as a barrier, then it's going to lead to problems and I suppose in hindsight I would make sure that we had a full proper agenda [between] all four people. Then everyone's concerns [would have been] on that agenda and then we would have been all looking at the same aim.*

> Key finding: Contractor alliance members need skills in determining client need, uncovering and successfully diffusing and working with power relations in work contexts.

When contractors work in alliances with others, clients generally prefer to work with one organisation, and leave issues of co-ordination, insurance and indemnity to the alliance. Clients had very clear expectations of alliances and their work. These included good organisational skills and continuous, open, honest communication between the alliance and the client, with early notification of any issues or problems. Clients expected alliances to be cohesive, to have trusting relationships between members and to have a spread and depth of expertise, as required. These relationships include relationships between alliance members as well as between contractors, contractor alliances and the client. In short, good skills in managing work and working with others.

> Key finding: Members of contractor alliances needed to successfully negotiate the completion of their work in co-operation with the work of other alliance members.

In order to work effectively together in an alliance, it is clearly necessary to have good organisational skills to share, co-ordinate and manage the work. Developing, using and maintaining these skills for collaborative work assists in developing a shared understanding of individually and collectively held responsibilities and requirements. A constant dialogue is needed between members of the alliance to enhance reliability and quality of work, and indeed, to ensure that the alliance delivers what was agreed and on time. When working in a contractor alliance, strategies need to be found to enhance shared understanding and to develop mutual interpretation of a plan or project brief. Sometimes managing the work and a sharing understanding of it is exercised through processes such as email, face-to-face meetings, phone and fax, as was discussed in the previous chapter (see table 8).

> Key finding: Contractor alliance members need to manage work processes in association with others in a way that develops shared understanding of the work.

Also required are good communication skills and these are discussed in the next section 'working with others'.

Working with others

When working with others, contractors spoke of the importance of establishing a good rapport with members within the alliance, with other peer contractors with whom an alliance may develop in time, as well as with clients and the people who worked within the client organisation. In the building and construction industry, for example, developing strong, positive relationships with peers made the difference between the work being comparatively easy or difficult.

> *The bricklayers, you'll see some bit where it will be hard for me [a painter] after and they'll sort of leave it as long as they can, just like that wall there will make it hard for me, so they'll start that side.*

Being perceptive and aware of the needs of others made a considerable difference in the process of doing the work and the quality of the outcome. In terms of the working relationships between contractor alliances, constant communication between members reveals the various values and perspectives of each contractor. For the contractor alliance to be a success, these values have to be brought into alignment. To work collaboratively as a 'team', it is necessary to share a range of information about the way each contractor does business:

> *… all of those financial nitty gritty things need to be discussed and how we're going to cost them. You know, one group said 'they should be this much' and another said 'they should be that much'. There was four [contractors] involved. Some wanted to do it for cost recovery, others wanted to do it for cost recovery plus a profit, others wanted to do it cost recovery plus a profit plus the cost of storing [the outcome]. So you have to come to a negotiated agreement on a price. Because different businesses see things differently, some believe you really need to make heaps of money and others believe you just make a little bit and cover your costs, so you have to sit down and negotiate. Four of us around the table got to what we thought was a fair price that everyone was happy with. That took a couple of hours.*

Through communication, values and perspectives are revealed and shared ways of working are developed. In these ways, knowledge of team-work is applied. Respondents spoke of 'looking out' for the other and helping them out when they were under pressure. As one respondent reported, it is necessary to 'keep the team together', to identify when others are under pressure and step in and assist, knowing that this will be a two-way process.

> Key finding: Members of contractor alliances need to be aware of the needs of others, have good interpretive skills and to engage in constant negotiation and communication about the work demands, its progress and the requirements for the future.

Working with others in an alliance does not always progress smoothly. Recognising the source of conflict and having the knowledge and skills to reach some form of resolution are skills that assist the continuing relationship and maintain the flow of work, as this respondent outlines:

> *Well quite often things aren't a happy bundle because there's, for example [name] have a different philosophy if you get down to it, they've got a slightly different philosophy than we have. So you might say something that goes against the grain of their philosophy but doesn't necessarily go against the grain of [name] philosophy, and that can cause friction. Because people get put out by those sort of things. And that friction can take quite a bit of time to heal. And you just learn 'look don't put them out, don't say those sorts of things around them, say it around us, but don't say it around them'. So you just learn to appreciate where they are coming from and it's only out of naiveté that you would say anything that goes against someone else's beliefs anyway. You wouldn't*

directly offend someone in a working relationship. So just trying to understand where they are coming from and respecting it, is important.

The importance of establishing good working relationships with others is underscored by the following respondent who observes the difficulties that can arise if the fears of personnel within the client's organisation are not addressed:

So there is that aspect of being the trade secrets aspect, the spying aspect as well as the aspect of, when you are actually doing the other work, the consultancy work for small businesses, that you can be perceived as a threat to their current stability of their work. Or even they might think that I'm trying to take their job.

The emotions and concerns of these stakeholders or peers often need to be addressed in order for the work to proceed, as in the instance discussed above.

Key finding: Members of contractor alliances need to establish and maintain good working relationships with a range of people. This includes being aware of potential problem areas emerging and engaging in assertiveness, and conflict resolution strategies where appropriate.

Self-awareness

Many respondents identified a 'knowledge of self' as one of the most important aspects of knowledge, skills and attitudes that they needed to operate successfully, whether in a contractor alliance or not. Being self-aware enhanced respondents' reflective abilities. Being reflective about their work was evident in the way alliance members talked about the work they did and how they monitored and judged whether they were operating successfully or not, as illustrated in the following quote:

I think it is a skill required for [people] working in the sort of area that I do is that you need to be aware of how people are likely to perceive anything that you do, and be almost about two steps ahead, even if you don't know how they are going to react, be thinking that there could be a range of reactions to it.

The work at hand was not the only source of reflection, so too was the future and its possibilities as discussed by the following respondent:

You do have to think about where you want to go next and you've got to have the confidence to get there and you've got to stand out to get there. I think you've got to have that confidence, you've got to be brash enough to get out there and say 'this is where I want to go, I've got to make the effort'. I mean you're all the same, I think that everybody who succeeds has to be like that.

Indeed, all respondents spoke of a strong belief in their capacity to understand themselves and what they brought to the work environment in terms of their abilities. For example, one respondent spoke of self-mastery and another spoke of her ability to step back from a situation when feeling vulnerable. This latter respondent was able to assess the situation and, as a result of 'stepping back', was able to reaffirm her own abilities in the face of the perceived immensity and complexity of the work to be undertaken.

Key finding: Contractor alliance members need a strong sense of self-awareness and the reflective skills and attitudes to constantly evaluate their strengths as well as their limitations.

This was evident in comments made by most of the respondents. As Bandura states, 'the successful, the innovators, the venturesome, the sociable take an optimistic view of their personal capabilities to exercise influence over events that affect their lives' (1997, p.13). Despite this, there was still a capacity for self-doubt, but this always needed to be kept in

perspective as one respondent admits 'having moments of incredible self-doubt, but the longer you do it the more you realise that nothing is that hard. [Now] new things don't daunt me'. This capacity to embark on the new was in evidence in all respondents.

> Key finding: Contractor alliance members needed a strong sense of self-efficacy.

The contractors interviewed had a highly developed sense of self-efficacy, a good knowledge of their own strengths and weaknesses. They also displayed highly developed 'learning-to-learn' or metacognitive knowledge, skills and attitudes. Metacognitive skills were in evidence in the way contractors monitored their understanding of the job, how the job was progressing and what was required in the future as well as the means by which they communicated these understandings to each other. The variety of work and constant new experiences also require these workers to have well-developed abilities to transfer learning across situations.

I think that each of the skills are transferable across those areas that they help to hone them differently … they actually inform each other.

> Key finding: The skills, knowledge and attitudes associated with self-awareness, metacognitive strategies and cultural understanding appear to be critical in contractor alliance work.

Interestingly, most respondents spoke about the need to learn to develop and maintain a better balance in their lives so that physical, social, spiritual and intellectual needs were met, not only through work. Contractors work long hours and put in considerable efforts to complete work of a good or high quality, often leaving the worker with little time free for other activities and commitments. Most respondents were working at finding ways to achieve a better balance in their lives with varying degrees of success.

> Key finding: Contractor alliance members needed to find ways of balancing work, home and leisure.

Learning the skills, knowledge and attitudes needed to operate successfully

Research questions two and three sought to identify how and where people develop their knowledge skills and attitudes. Specifically the questions were:

- How do they acquire the knowledge, skills and attitudes necessary to maintain technical, occupation-specific proficiencies?
- How do they acquire the knowledge, skills and attitudes needed to operate successfully within loosely coupled strategic alliances?

As discussed in the literature review, many of the skills identified in the previous section are learned informally. Our findings show that contractors rely on a range of strategies to initially develop and maintain the knowledge, skills and attitudes they need to operate effectively and these are summarised in table 10.

Table 10: Ways of learning

Alliance	Formal learning#	Doing the work	Reading and the internet	From other alliance members	Networking with others doing similar work	From the client
BS 1	*	*	*		*	
BS 2	*	*	*	*	*	
B&C 1	*	*	*	*	*	*
B&C 2	*	*	*	*		*
CS 1	*	*	*	*		
CS 2		*	*	*	*	
Tr 1-1	*	*	*	*	*	
Tr 1-2	*	*	*	*		
Tr 2		*	*	*		
Tr 3	*	*	*			
EE 1	*	*	*	*		
EE 2	*	*	*	*		
Com/IT 1	*	*	*	*		
Com/IT 2	*	*	*	*		

Note: # This category includes information sessions, seminars, professional development and conferences.

Maintaining technical, occupation-specific proficiencies

In most cases, maintaining technical, occupation-specific proficiency occurred through the practice of a mix of formal VET undertakings as well as through informal learning. Developing further expertise or technical knowledge also occurred sometimes through undertaking a course, teaming up with someone else who had particular knowledge that was desirable and that the contractor wanted to learn, or through talking with others.

In terms of occupation-specific proficiencies, clients did not provide contractors with access to formal learning opportunities that may operate within their organisations, leaving these workers responsible for organising their own learning. However, a mutually beneficial arrangement sometimes developed where the client would assist the contractor to informally learn specific aspects required for a future job through information sharing. For example, in the community services industry, one respondent spoke of a client asking her to facilitate a series of sessions on a new way of managing a specific group of users of the client's service. The client readily provided her with the necessary reading material when she admitted that she knew nothing of this process. In this case, the client supplied the content knowledge required and valued and trusted the contractor's process and facilitation skills. In another case, in the building and construction industry, the client ensured that the contractors were aware of the latest products available by regularly faxing the contractors technical update sheets.

Some respondents sought out information on new products or a specific task to be mastered. Seeking out information is not enough to constitute maintaining proficiency. This information must then to be successfully applied. For example, one respondent told of learning new technical information as a result of undertaking a particular job. This information was then used to explain the implications of the work to stakeholders.

It is evident from the above that respondents used formal as well as informal learning strategies to develop and maintain technical proficiencies. Formal learning strategies were also used for a number of purposes. Formal learning experiences included attending

conferences, seminars, short courses and information sessions. As the list below indicates, this method of learning was important in maintaining proficiency in the worker's technical/professional field. Attending such sessions served a number of purposes:

- to meet and network with others in the field (and to look for potential alliance partners)
- to keep up to date and monitor developments in the field
- to learn skills that might be needed in future variations in the work
- to obtain a necessary qualification

In terms of maintaining technical proficiency, attending either formal VET courses or short-term learning through workshops or conferences was both advantageous and problematic. For some, tensions were created by the cost of the session and the loss of income while attending. For those who valued this experience, it was an opportunity to keep abreast of trends. For other respondents, attending courses was of dubious value as they offered nothing new. Using VET courses to network after having anticipated what skills might be needed to gain entry to another part of the market is illustrated in the following quote:

> *But the other big plus and another reason that I do them [VET courses], it's not a main reason but a support reason why I do the courses … is the network. So much networking you do. Because you are doing the course in an area that interests you and you only see people at that course who are really keen because they are always on weekends and nights, so they are not going to do it unless they are keen. And they are generating, or 99% are generating their own work. It's great because you meet a whole lot of people and that's part of that networking, it's going on all the time. And it's recognition of skills too because you are looking at other skills that you can bring in.*

Key finding: The knowledge, skills and attitudes needed to maintain technical proficiency were obtained through a variety of means, including VET courses, teaming up with others who had the proficiencies, seeking information and talking to others. VET courses were used for a variety of purposes, including to extend networks and to learn skills for future needs.

Knowledge, skills and attitudes needed to operate as a member of a contractor alliance

The knowledge, skills and attitudes needed to operate successfully as a member of a contractor alliance were learned largely through 'doing the work'. Learning by doing the work was a strong theme in the data from all respondents

> *My major source of learning is doing different tasks, actually getting that knowledge from the work I do.*

This was particularly so for the proficiencies needed to manage the work. Doing the work and learning from mistakes is one aspect of learning by doing, as told by the following respondent in learning to estimate time taken for jobs:

> *I made a lot of mistakes in the early days when I was quoting. When I was working for somebody you don't take much notice of the time or you are not that interested in how long it is going to take, and you're not going to bust your guts to work. You've done your eight hours and you go home. Whereas [when you are] self-employed if you've got to finish something you can stay back another two hours just to finish it so you don't have to do it tomorrow.*

Strategies for learning from doing the work come from a number of sources. These include, watching and deliberately soliciting information from co-workers and others while working as an employee:

> *I picked up all the tricks by soliciting and watching other people, how they managed clients, and then I became a Quality Assurance Manager there and I prepared the QA manual that implemented and got the company certified, for third-party certification and by then not only had I understood what they did but I'd taken them somewhere and put them somewhere else and according to QA we*

should be doing it this way and then we started with that. Whether that was better in the long run I don't know. I left not long after that, but you know that's how I picked it up.

The act of working in an alliance also provided opportunities to develop needed proficiencies. As a result of working in an alliance, respondents often gained new opportunities to learn both new knowledge and new ways of working:

[working in an alliance] opens up new doors I guess and new experiences in terms of learning new things that we wouldn't normally be involved in.

Learning through working with other alliance members was one of the key benefits most respondents identified from participating in contractor alliances.

Key finding: Learning by doing is supported by reading, using the internet, learning from others in the alliance and through the use of networks.

The variety of tasks undertaken by contractors leads to the continuous development of knowledge through processes such as gathering information, problem identification, and problem-solving, underpinned by conceptual occupation-specific frameworks and experience. These factors assist respondents to transfer learning from one situation to another. For example, the following contractor uses knowledge from other experiences to identify what is common and what the issues are.

Knowledge you pick up doing a job on one particular application can often be applied to an application of another person. Even though they might be getting a totally different product set, particularly in the electronic commerce side of things, the issues are common.

The same alliance member discussed how his previous experience in managing the work of others was important in assisting him with problem identification and the development of solutions.

I think I understand the business process—that's very important. Sort of spent years in that side of things. I have an understanding of what is important to a commercial operation of a business, then you can identify from that which aspects can be easily introduced and cost-effectively introduced which will make significant savings … And commercially they like that.

These were skills he was then able to use in managing the work in collaboration with other alliance members. For this contractor alliance member, knowledge of the commercial operation of a business provides conceptual frameworks and a range of positive and negative experiences to draw on and apply to new situations. For these workers, there is constant challenge in the form of work requiring knowledge they may not have, learning about new ways of working and ways of thinking about familiar situations from different perspectives. Knowledge and learning is continuously developing—at least for those contractors who are successful in their fields.

In conclusion, the knowledge, skills and attitudes contractors require to work effectively in alliances involve an ability to work with complex and often challenging situations. Knowledge, skills and attitudes are applied within a context that is illustrative of the interplay between co-operation and competition, trust and control (Sydow & Windeler 1998, p.267). Contractor alliance members are constantly problem-solving and transferring knowledge, skills and attitudes across settings. In addition, strategic competencies (Mulcahy & James 1999, p.18) such as scanning the horizon, perceiving opportunities and assessing potential alliance relationships are part of the everyday skills used by these workers. Highly developed metacognitive skills and self-awareness are evident in the skills required to do the work.

Structuring VET to support those in new working arrangements

The discussions in the previous chapter revealed that, to operate effectively, contractors needed:

- technical specialist knowledge
- knowledge required to manage the work
- ability to work effectively with others
- capacity for self-awareness and skills related to learning and development

The data presented also showed that respondents did acquire the knowledge, skills and attitudes needed through VET programs, although there was a heavy reliance on informal learning. This learning included talking with peers, seeking information through reading and the internet and learning by doing the work. Respondents also commented that they undertook VET programs for reasons that may include obtaining a formal qualification, but in many cases this was not the primary objective. VET programs were useful for skill acquisition but were also prized for the networking and related opportunities that may result.

This section explores the final research question 'What kind of VET structure/arrangements would best support people working in these environments?' The question will be discussed by considering some of the issues raised in the literature review about the context of VET. Relevant data will be considered in relation to the research question and the implications for policy-makers and researchers interested in developing a responsive and robust VET system in Australia. In the literature review, three key changes occurring within the VET policy landscape were identified. These were:

- the implementation of a market approach to VET
- the shift to emphasising the workplace as a principal site for VET
- delivering VET through a competency based framework

These features will be used to organise the conclusions discussed in addressing the final research question.

Contractors, their alliances and the training market for VET

Viewing VET as a training market emphasises issues of demand, supply and consumer need. Demand for VET services and products comes from a range of client or stakeholder groups. These include learners who are:

- not in the labour force and preparing for future work
- currently in the labour force and wishing to change to a different job or occupation
- currently in the labour force wanting to improve performance in existing work

The data collected within this study address, most directly, the needs of the third target group. The study has attempted to identify the knowledge, skills and attitudes that contractors, in alliances with others, require to perform effectively, both now and in the future. The discussion in the remainder of this section will draw upon the experiences of people currently in this working arrangement and will consider the ways in which VET structures and arrangements may assist this client group. Where appropriate, attention will be paid to the ways in which VET can assist people who may be entering the labour market as well as those interested in shifting to contractual, self-employed work in the future.

Encouraging the demand side for contractors and their alliances requires VET to have something to offer these consumers. To engage in VET, contractors need to feel that the return on their investment will be worthwhile. As discussed, respondents seemed skeptical about what VET programs might have to offer them. In part this may have been due to their lack of knowledge of what VET could offer. This finding supports the conclusions drawn in a recent study by Hall, Bretherton and Buchanan (2000) which identified a lack of information flow between the government, employers, and VET providers. At issue is how potential VET consumers working in contractor alliances might learn what VET has to offer them.

Although respondents were skeptical or not directly engaged in VET, the data revealed that respondents were also actively engaged in learning. The differences in attitudes between training and learning were echoed recently in another report. As discussed in the literature review, the Australian National Training Authority conducted a study into the attitudes, values and behaviour of 3866 members of the community towards skills and lifelong learning. It concluded:

> *Two underpinning insights have emerged from all research activities ... First, Australians are passionate about learning but for most of them learning is not synonymous with education and training and their passion is not linked to their experience—or even their expectations—of formal education and training* (ANTA 2000, p. 4)

The data reported in this study support ANTA's findings—learning is important to respondents, and learning is sought through a range of informal activities, not necessarily through VET. Those interviewed did identify a number of learning needs that could be met by VET and these are discussed below. The type of content and delivery desired by the respondents would:

- enable them to better understand their particular product or service and assist them to anticipate future changes strategically
- be delivered in shorter and sharper components than existing course or module content
- present material in ways that accord with, and meet the needs of, the target group (such as providing opportunities for group networking)

The extensiveness of demand for these kinds of VET services and products needs further investigation and is outside the scope of this report. However, the following findings provide insights that, if replicated in future studies, have implications for VET service and delivery.

Focussing on strategic horizons

Based on the data presented in this report, VET structures need to assist contractor alliances to anticipate changes related to their work. In addition, VET structures need to assist participants to learn as quickly as possible how issues or emerging products and tools are likely to impact and/or be of assistance to them in their work. The following quote is typical of the comments made:

> *To stay viable in the market, to be competitive in the market it's like having to predict what's going in terms of skill needs and knowledge and all that sort of thing. How do you go about, what is the process you use for that future scenario type stuff you are working on?*

VET needs the flexibility to be able to provide seminars/workshops based on strategic anticipation of where particular features of the client's market might be going. To achieve this, VET structures would need to be innovative and appropriately resourced so that providers are able to research trends or they have access to services to undertake such research. VET providers then need the capacity to translate these trends into accessible information and practical strategies to be used to generate learning. In this way VET providers would be playing a more proactive role in assisting businesses and contractors, rather than in simply responding to needs already widely identified. This signals a need to better integrate research and teaching within the VET sector and supports other studies (Marginson 2000) that call for VET to become better networked and closer to 'the technological edge in every industry'.

Key finding/recommendation: Better integration of research information on particular business sector trends within the VET sector is needed to support particular industry and business strategies.

This finding may also require shifts in the way VET is delivered and this implication will be discussed in the next section.

Supply of VET products and services

Members of contractor alliances indicated that much of their learning is done on a just-in-time basis. Meeting the learning needs of contractor alliances requires ways of delivering or providing access to content and processes that meet specific needs at a given time. For example, one alliance worker had not undertaken a particular type of work task a current job would require, and was aware of her existing skill deficit in this particular area. Her response to this learning need was to take on this particular task with the specific motivation to use the experience as a means of acquiring an understanding of the structure, content and application of the required knowledge and skills. This was a common response from those interviewed—doing in order to learn, rather than learning in order to do.

So, how might VET arrangements be modified to supply these demands? Respondents provided some indications about how services might be supplied. These included shorter, sharper delivery of workshops and information sessions and the promotion of dialogue and interaction. The information needs of the respondents participating in this particular study related to the provision of opportunities for utilising emerging skills by sharing experiences with colleagues. Such experiences may range from predicting how future change will impact on their intended directions, to furthering their networks or to learning specific operations of computer programs.

VET delivery

Participants also identified the importance of networking and learning by doing. VET providers need to recognise the importance of group working, networking and learning by 'doing' for those involved in finding their own work with others. Opportunities to join up with others and to hear their stories, provide valuable learning opportunities to compare and contrast, as indicated by the following respondent:

> *It's always good to discuss similar situations with people who have been there as well, and so a workshop where maybe there is a small number of similar people and they are able to share all their experiences and ideas is always going to be valuable for everyone involved, because you can compare and contrast. Otherwise I can't imagine, like a module of training that would specifically address all of those sorts of things that come up [when talking with peers]? Theoretically there could be, but I can't see it. It could be helpful actually but I can't … it is the* experience of doing it *that makes you reflect and learn what it is that you are actually doing. Like a module of training, even if it was workplace based. 'Here's a heading about communication.' 'Here's a heading about …', 'read it and think about it and maybe do this activity'. But you know, in theory that's the way a lot [of training packages] work [but] the value of what you are actually learning is from actually doing it, rather than being taught about it.*

In this extract, the respondent is doubtful about the relevance of undertaking a module in a training package. Respondents wanted opportunities to process what they were doing with others undertaking similar activities and to extract learning for future working from reflecting on those experiences. Opportunities to maximise networking possibilities are an important source of new work and of information exchange. The challenge for VET providers is to be able to provide opportunities for such forums.

There are also implications, in the context of people working within these arrangements, for VET policy which emphasises the workplace as a site for VET. VET provides standardised

courses for particular jobs and these can be modified if an enterprise wishes to add its own content or emphases. This is excellent for VET providers negotiating with enterprises to provide training for groups of employees. However, what if the 'enterprise' consists of a party of one? Contractors work by themselves and therefore have little access or bargaining power within these circumstances.

As discussed, the contractor alliance members participating in this study valued opportunities for interactivity. VET providers would do well to examine the ways in which the interactivity afforded through the internet might enable members of the target group to share information.

Opportunities for establishing interactive delivery on-line are available through the national project policy initiatives established by ANTA to meet the 'emerging needs associated with new technology and delivery systems, particularly on-line delivery' (ANTA 1999, p.48). While using the internet and related information technology is not the only solution, they do offer potential for the development and provision of interactive forums where a variety of groups, such as contractors, may share stories and experiences. The success of these and other opportunities will depend on the skills and resources of VET providers—the degree to which they can present information of relevance to the target group as well as providing opportunities for people to share.

However, the development of innovative VET services in delivery significantly depends on the quality and creativity of VET providers, and some research (for example, Bennett, Priest and McPherson 1999; Grevelle 1998) suggests this is a significant risk. At issue is the professional development of the VET industry and its capacity to develop creative and flexible materials of relevance to target groups. Grevelle (1998) points out that meeting the changing needs of students requires a reconsideration and restructuring of VET provider professional development.

> Key finding: VET providers need the means to be able to deliver short, just-in-time content, and need support to be able to do so innovatively and creatively in a way that meets the demands of the target audience.

Content complexity

Another issue emerging in the data is whether the content provided through VET is of sufficient complexity and challenge to be appropriate to the respondents concerned. A respondent who had been involved in undertaking accredited VET programs echoed this concern:

> *I have gone to a couple of formal courses—probably when I was kind of getting started, but I just found them very non-effective in helping me move on—it always sounded as if I was already doing what they were telling me I should be doing.*

In this case, the respondent felt that the material presented in the VET program was too simplistic and did not match the demands she faced in her work. This may be attributable to the lower end of the Australian Qualifications Framework (AQF) framework receiving the most attention in training package development. Much development work for AQF training packages to level three (that is, certificate three level) has occurred with some work now extending training packages to level five (that is, at diploma level). However, in many industries training packages for these levels are currently in the process of being developed. It is perhaps timely to consider the kind of content (and its delivery) and the appropriate level of challenge for those in the target audience and also for employees facing similar challenges in their work. If there is truth to the claims in the literature (Berryman 1993; Bailey 1990) that changes in work demands are leading to increased cognitive demands and upskilling, then this needs to be reflected in the content development of higher AQF levels.

Like other studies reported in the literature review, this research found that, of the contractors interviewed, few received formal training from their client organisation. Given the target

group, this is not surprising. However, along with others studies (for example, VandenHeuval & Wooden 1999; Hall, Bretherton & Buchanan 2000), it does provide evidence of a trend towards shifting the responsibility for training onto the individual. Like Hall, Bretherton and Buchanan (2000), this study found that contracting organisations expected individuals to be already skilled. There were, however, learning linkages between contracting organisations and contractors in terms, for example, of giving and receiving information.

Content in pre-service qualifications

Another key theme that emerged from the data was the limited degree to which their previous qualifications had prepared respondents to be responsible for their own work and to work with others. The following respondent echoes this concern:

> *I haven't gone off and done formal management training apart from my [VET qualification], which I suppose is a semi formal management qualification but it doesn't say 'this is how you manage' [yourself and others]*

What appears to have been overlooked to date in VET policy is the recognition that not all VET learners will work as wage and salary earners in traditional work organisations. This is especially the case in industries where the labour market is largely organised on a contractual basis; namely, the building and construction industry and the communication/information technology industry.

> Key finding: There is a need to re-evaluate pre-service programs in terms of how they assist people to prepare for the world of new work arrangements where they may need to be more reliant on their own resources to find work, which includes looking for contracts and being self-employed.

To what degree do VET programs, including pre-vocational school-to-work programs, assist people to develop needed knowledge, skills and attitudes to operate successfully as contractors and in alliances with others? While the respondents included in this study all had previous work experience of some kind, the growing trends in non-standard working arrangements would suggest that, as more and more people are going to be working for themselves, this needs to become a mainstream VET concern. This also raises the issue of what happens when people engaged in VET do not have a consistent workplace in which to learn. These questions need to be considered by VET policy-makers.

Type of content

It is evident from the earlier discussion of the knowledge, skills and attitudes that people working in contractor alliances require to operate effectively, that a mix of specialist-technical and generic competencies are utilised. In a rapidly changing work environment, specific technical knowledge and skills have a shorter shelf life and will need constant updating. This has implications for VET provision. A key issue is how does VET provide for ongoing technical and professional development and, particularly in the case of contractors, how does VET ensure contractors know about what is on offer?

This next section will discuss the application of generic competencies in use by contractors in alliances. It draws on information presented in the previous chapter about how existing contractors use these competencies and argues that our understanding of them needs to be modified and expanded to account for what contractor alliance members do. This information is important in this report because of the implications for VET content in both in-service and pre-service courses.

Clearly, more work needs to be undertaken on the use of generic competencies in contemporary work situations, and this conclusion has been identified by other research, such as Moy (1999). If the findings of the present study are replicated, VET providers need to identify ways in which learning opportunities incorporate the capacity to learn and extend the

relevant knowledge, skills and attitudes required. This will be needed in both in-service and pre-service VET programs.

Generic knowledge, skills and attitudes

The literature review summarised the eight generic or 'key' competencies identified for development in VET policy. Of the eight key competencies mentioned, four (collecting, analysing and organising information, using mathematical ideas and techniques, solving problems and using technology) are in use in contractor alliances in typical ways that operate for many people in a range of working situations. Of particular interest in this study is the way in which the four remaining competencies (communicating ideas and information, planning and organising activities, working with others and in teams, and cultural understanding) are in use and play a critical role in the success of the contractor alliances studied.

Communicating ideas and information

From the data discussed in the previous chapter, communication is a key aspect of successful work activity between contractors, their alliance members and with clients. Unfortunately, the definition of communication provided within the generic competencies (see table 3) does not adequately describe the communication processes used by members of contractor alliances in this study. What was evident in the discussion of findings was the importance, for example, of negotiation. Negotiation can be understood as a mode of communication, but it also has an importance in its own right.

> Key finding: People involved in contractor alliances participate in a number of other communication processes, which includes self-expression, as well as mutual problem identification, needs identification, conflict resolution and negotiation.

The nature of contractual work and working within alliances is based on the development of effective, mutually enhancing working relationships. Contractors engage in external negotiation processes when communicating with contracting organisations. In addition, because the contractor alliance means for example, that people cannot be ordered to undertake work in an authority-driven way (as might be the case in a traditional organisation), the contractor is frequently involved in internal negotiations with other alliance members. This added layer of complexity is constantly at the forefront of contractor alliance operations—external negotiation with contracting organisations and others, and internal negotiating processes with members within the alliance. Therefore, a key attribute of successful alliance work is monitoring others' interests as well as one's own.

> Key finding: More work needs to be undertaken into the application of the key competency 'communicating ideas and information' in contemporary work environments, and expanding and modifying its description to suit changing working environments and arrangements in particular work sectors. Specific consideration should be given to the development of negotiation skills courses, sessions and follow-up support targetted at contractors.

Planning and organising activities

Planning and organising activities for current and potential projects is not a new phenomenon, and is undertaken by many working people. Planning and organising activities has to be understood as including the technical skills of project management. For members of contractor alliances, project management often involves more practical and discrete activities that are typically not as large as the term 'project management' usually implies (large resources on big projects). However, as with the generic competency 'communicating ideas

and information' discussed above, operating within a contractor alliance adds a further layer of complexity when applying this competency. A key aspect of work management within a contractor alliance is the identification of those aspects of the work which are shared, delegated or led by members of the alliance.

Alliance members need to develop strategies for building up a shared mental model of the work involved as quickly as possible and to update and maintain that collective understanding, sometimes for different projects and with different 'others'. A shared mental model includes a common understanding of problems, goals, information cues, strategies and other members (Blickensderfer, Cannon-Bowers & Salas 1997). Aspects of shared mental models include prediction of future events, mutual expectations and shared explanations of task and team demands which are vital in situations of uncertainty. The alliances studied in this research used a variety of strategies to build up shared mental models for work management purposes. These included plans that might be a project brief, a building plan or a set of specifications for a job. In this way the plan had multiple roles: it was used as a plan, as a communication tool and as a process of monitoring work management. Successfully building shared mental models in alliances is a key aspect grounded in the context of teamwork.

Key finding: Management-focussed courses need to be structured to include the knowledge, skills and attitudes needed to plan, organise and manage a range of activities both individually and collectively, including the use of tools such as those found in technologies which enhance collaborative work. Such courses need to be specifically targetted at contractors, including those working in alliance arrangements.

Working with others and in teams

A key question underlying this study is in what ways are contractor alliances similar to or different from typical team structures? One recent model of particular interest to this study has been developed by Dickinson and MacIntyre (1997, p.21). According to Dickinson and MacIntyre, teamwork is a composite of the interacting attributes of communication team orientation, leadership, monitoring, feedback, backup and co-ordination, which form a continuous 'learning loop' (for definitions of the attributes, see table 11). Teamwork requires that team members have positive attitudes toward the team and its task, have been provided adequate direction and support for accomplishing team goals, and know their own tasks and those of other members with whom they interact. In traditionally defined teams, these requirements allow team members to co-ordinate their activities by monitoring the performance of other members, communicating with them, and providing feedback and backup assistance when needed. As a result, team leaders and members focus their attention and concern on improving teamwork rather than on individual success and performance (Dickinson & MacIntyre 1997, p.22).

The discussion of findings has already highlighted the importance of communication to contractor alliances. Processes of communication have also been discussed as have the ways in which members of contractor alliances build up a shared understanding of each other's work and how they monitor and c-ordinate individual and collective work.

However, a contractor alliance does not operate as a traditionally defined team in many important ways. Key differences emerge when teamwork indicators are considered in relation to how contractor alliances operate. Contractor alliances, for example, do not operate within a traditional organisation comprising relationships of authority and accountability. Consequently, it is up to individual members to identify what resources they need (not a designated 'team leader'). No one person is likely to have consistent leadership and accountability responsibilities, as in the case in a traditional work organisation. Leadership and accountability, for example, are likely to be negotiated and then distributed across jobs and contexts and therefore, across members of the contractor alliance.

Table 11: Indicators of teamwork

Teamwork element	Definition
Communication	Exchange of information between two or more team members in the prescribed manner and using proper terminology
Monitoring	Observing activities and performance of other team members
Feedback	Giving and receiving information among team members
Backup behaviour	Assisting other team members
Co-ordination	Team members executing their activities in a timely and integrated manner
Team orientation	The attitudes that team members have towards one another and the team task
Team leadership	Providing direction, structure and support for other team members

Source: Dickinson & McIntyre (1997)

Given the short-term nature of contract work, a contractor may belong to a number of different alliances that will change over time. As a consequence, a contractor may not have either the disposition or motivation to be acting in traditional team-based and group-enhancing ways by engaging in activities such as giving and receiving feedback, or providing backup for other members. The implications of whether these differences in group identity and consequent behaviour have impacts on performance is beyond the scope of this paper. Future research could examine the presence or absence of certain team behaviours and impacts of performance and their relationship to collective competence (Waterhouse et al. 1999). Typically, teams within traditional work organisations have boundaries that demarcate and clarify roles in relation to the work of other members. In contractor alliances, such boundaries, roles and responsibilities are less clear and require constant negotiation. In these contexts, contractors rely on a keen sense of cultural understanding.

Key finding: More work needs to be undertaken into group identity in relation to the concept of 'temporary teams' and its relationship to performance.

Two further generic competencies: Cultural understanding and learning to learn

Although work on developing this generic competency ceased in 1996, this study supports other research (for example, Moy 1999) that calls for work to recommence. In doing so, however, identification of 'what counts' as cultural understanding adopted in this study has been significantly broadened from the original 1993 concept of generic competency. Originally, the competency 'cultural understanding' was focussed on issues of ethnicity and ethnic diversity. While this is important, we argue that this is an unduly narrow point of view. Within organisations, for example, cultures are defined as the 'set of understandings or meanings shared by a group of people' (Louis 1986, p.74). In this context, culture is a set of understandings shared by a group of people and which are largely tacit among members. To operate successfully within contracting organisations and within alliances, contractors need well-developed skills for discerning values and sometimes implicit meanings in order to manage relationships important to the contract and ongoing work possibilities. As the data showed, by operating in dynamic and changing conditions, the contractors interviewed needed to be looking constantly for differences between the contractor and others to avoid the error of making a wrong assumption that the values and interests of others are the same as those of the contractor. Contractors, then, used this information to modify and adapt their ways of working in a process of feedback, reflection and learning.

Key finding: Work on the competency 'cultural understanding' needs to recommence and be expanded to incorporate use of culture in both work and other social contexts.

The data presented also identifies the need for a further key competency: learning to learn. Moy (1999) identified the importance of this competency in a review of research undertaken on the impact of generic competencies on workplace performance. This competency involves explicit and conscious application of learning strategies and related cognitive processes involved in extracting meaning and transferring it to other settings. Encompassed here are inductive and deductive thinking, and thinking in systems (Moy 1999, p.9). As discussed in the previous chapter, the contractors participating in this study all had well-developed capacities to transfer meaning from one particular context and to apply it to another. Furthermore. they had well-developed skills in monitoring their progress and the success of their strategies.

> Key finding: More work needs to be done on an additional generic competency 'learning to learn' and incorporating attributes implied by it into all pre-service programs and schools.

Discussion and implications

This study has shed some light on an important emerging trend in the changing nature of working arrangements. It has explored the ways in which contractors in a range of employment sectors join up with others to form contractor alliances for reasons which include managing the uncertain ebb and flow of demand for work , increasing job opportunities and expanding resources and skills. Contractors working in alliances with others need particular knowledge, skills and attitudes to operate successfully and these have implications for existing VET structures and delivery. Although the research undertaken is exploratory, and the conclusions drawn are thus tentative, they raise important implications for VET structures and arrangements worthy of future attention and follow-up.

A key question to explore in future research is the extent to which the findings discussed here represent a phenomenon that is widespread and growing in momentum or whether the findings constitute a minor issue that is not likely to affect many people or increase in influence. Future researchers and policy-makers need to monitor changes to working arrangements and their implications. What is needed also is a follow-up research approach that investigates a broader cohort and tests the findings discussed in this study. Issues emerging from this research for further investigation include exploring the importance of alliances to contractors to achieve their work. To what extent is the level of alliance effectiveness linked to the level of performance and success of contractors? If alliances are important to contractors in the manner described here, are there differences in outcomes and needs within different types of alliances, for example, between traditional blue-collar and white-collar alliances? Do these alliances have different VET-related needs? Likewise, to what degree do those working in contemporary work environments also need the skills used by contractors working in alliances?

Other implications emerging from the findings of this study include considering the degree to which the findings summarised here signal a growing concern with the way VET is framed and delivers its product.

The findings also indicate that existing VET structures which privilege workplaces as the primary site of learning disadvantage those without consistent access to those worksites. A related issue of concern is the way in which the existing VET system is predicated on a stable work environment. However, what the data in this report show is that contemporary work environments for many people are anything but stable. How well does the current VET system accommodate work environments that are uncertain, turbulent and dynamically changing? What changes are needed to provide a system that responds well to workers experiencing these conditions?

As discussed in this report, participants were not able to articulate the skills they need for the future. Often, in the cases where they could identify required skills, these skills were required

immediately. It is a well-established fact that the process of formally accrediting a particular course can take many months. In an environment that shifts rapidly, this situation may result in information already out of date by the time the course is presented and thus be of limited value to participants. What are the implications for such a system in terms of the development of skills not yet known or anticipated? How, for example, do VET structures manage to responsively encourage the development of knowledge and skills when the knowledge and skills needed have not been identified? What the data contained in this report show is that many of the people interviewed gained their skills independently of the VET system. How do VET structures respond to this dilemma?

The existing VET system is also underpinned by the assumption that there is a stable body of skills that can be taught in a standardised way. That there *is* technical job content important for workers in the future is not contested in this report, nor is the way that VET systems deliver this content. However, as discussed in this report, technical skill forms only one (albeit necessary) component of successful work. As discussed, other job content knowledge, is also important for success. This includes, for example, wider issues such as the balance given to health and wellbeing in working. What emphasis, if any, is given to these kinds of broader issues in preparing Australians for the world of work? Such questions are particularly important given the rise of work intensification and uncertainty.

What is needed also is a VET system that supports the development of intra- and inter-personal skills as well as technical or job-specific ones. For example, the skill of resilience was central to almost all of the participants interviewed in this project. However, it is argued that this attribute is unlikely to be obtained through a learning package or taught in a traditional classroom. If other studies support the conclusions that this and the other skills and attributes discussed in this report are both important and necessary in equipping Australians for the world of work, then what kinds of structural and pedagogical approaches best support the development of these skills? How might both policy-makers and VET providers better understand the learning processes involved in developing these qualities? It is contended that if VET policy-makers do not understand the learning processes required beyond technical job skills, then they may be at risk of failing in their brief—which is to develop flexible systems of learning to enhance the skills of Australians. It is contended that, if policy-makers conceptualise learning in a way different from that actually achieved by Australians, then they will fail to provide the best approaches to how that training may be funded and delivered.

In the data, tensions and contradictions were also evident between the kinds of roles VET providers might be expected to play given future possible directions in the changing nature of work and the consequent demands of VET providers. Some research has identified the dichotomy between different forms of VET provided for different occupational groups (Mulcahy & James 1999). Others have claimed that the commodification and packaging of VET is something akin to a 'McDonaldisation' of VET[2]—the equivalent of a 'fast food' form of knowledge acquisition. Yet this report supports the growing evidence (for example, Brown 2000; Mulcahy & James 1999; Waterhouse, Wilson & Ewer 1999) that what is needed, in addition to this role, is a quite different form of VET provider—one which works as mentor and advisor with students, individually customising and shaping VET in accordance with the individual's needs. As indicated by the participant responses in this study, the tension between the 'McDonaldised' and 'customised' roles of VET provider is heightened, given that both roles are likely to be needed by participants at different points in time. The implications of this tension highlight the need to rethink the roles of VET providers in different ways along with the ways in which a VET system supports such providers.

This report signals a number of changes in the working arrangements people make to secure

their livelihoods. It also supports previous research which signals changes in the skills needed in the labour market. More work is needed to understand better the impacts of these changes on working people and to identify the changes necessary to the VET system to assist people to respond and succeed in these environments.

[2] I am indebted to Peter Waterhouse for this analogy.

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ISBN 0 87397 755 6 print edition
ISBN 0 87397 756 4 web edition