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The importance employers attach to employee qualifications

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1. Introduction

Research conducted by Ridoutt, Dutneall, Hummel and Selby Smith (2002) confirmed that few employers are interested in qualifications per se as an outcome of enterprise training (that is, training largely initiated by employers and contributed to in part or whole with enterprise resources). Only two of the twenty-three case study enterprises selected from across five industries valued and actively sought qualification outcomes for their employees who had completed enterprise training, in terms of qualifications defined in the Australian Qualifications Framework (AQF). This result was despite the fact that most of the case study sites had invested significantly in training their employees, often in a formal and structured way, and, in at least six cases in partnership with a registered training organisation (RTO). Moreover, while for twenty-two of the enterprises there existed a relevant Training Package, a copy of which they had purchased, only nine were using the Package (including those about to use it).

What was apparent from the study was that the formal (and costly) assessment processes required for recognising workplace competence in order to achieve a qualification were not deemed necessary by employers for all types of competency. Unexpected employer perspectives on the value and active pursuit of qualification outcomes for employees were identified. The 2002 study hypothesised that employers adopt a 'risk management' approach to the process of competence assessment. As described by Gonczi, Hager and Athanasou (1993):

> *There is no universal method of performance assessment and the process of assessment is largely one of balancing conflicting demands and compromising fidelity… Compromises may be required between the acceptable costs of testing vis à vis the acceptable costs of errors in judgement (Gonczi et al, 1993, p.50).*

In this study (Ridoutt, Selby Smith, Hummel and Cheang, 2005) further data, mostly quantitative data, were gathered to build on the material obtained from the previous research. The central question being investigated is "what value do employers assign to qualifications?" In particular the study sought to ascertain:

- The overall level of importance employers place on the qualifications held by their employees;
- Whether employers value qualifications differently by type of employee (eg. new or existing), type of job classification and type of enterprise;
- The types of competence for which formal recognition is valued; and
- The decision-making processes which are adopted.

2. Some Relevant Literature

Interest in qualifications as an outcome per se largely emanates from the vocational education and training (VET) sector (see Moran, 1998; Sargent, 1998; and Noonan, 1998). Certainly qualifications are tangible outcomes of training for individuals, employers, training institutions and governments. Also, they are comparatively easily counted. Qualifications delivered against an overt standards framework facilitate mutual recognition of skills and knowledge across wide geographic, jurisdictional and international boundaries (Varanasi, 1999). Qualifications are often used as the currency for international comparisons (eg. Prais and Steedman, 1986), although evidence is mounting that qualifications are perceived quite differently in diverse countries, societies and cultural contexts (Green and Sakamoto-Vandenberg, 2000; Keating, 2002; Streumer, 1999; and OECD, 2001).

However, the literature strongly suggests that qualifications for workers (especially arising from enterprise based training) are not a principal concern of employers (eg. Wooden and Harding, 1997). Training investment is meant to contribute to benefits for the business; anything else that derives from that investment (for instance qualifications) is welcome but incidental (Noble, 1994; Stokes, 1998). See also The Allen Consulting Group (1999) and The Research Forum (2000). The benefits of training to employers include improved quality; improved productivity and competitiveness; multi-skilling of employees to cover knowledge and skill gaps; compliance with government and other regulatory requirements (such as occupational health and safety legislation); and workplace change.

Small businesses, which employ approximately two-fifths of the total Australian workforce (Australian Bureau of Statistics, 1998), are argued to be especially indifferent to the attractions of the VET system in general and qualification outcomes in particular (Gibb, 1999; Stokes 1998).

When considering outcomes for employers, the research questions have tended to revolve around two main issues. First, there is the value of qualifications as a 'screening' tool in personnel selection, to estimate work-related characteristics of candidates for selection such as motivation, persistence and technical skills. Qualifications then represent a formal information system which operates in labour markets to assist employers make their human resource management decisions (Keating, 2002; Wooden and Harding, 1997). Secondly, there is the return on investment in training. Part of the tolerance employers display in calculating the costs and benefits of training relates to the difficulty of isolating the influence of training effects and ascribing causality (Long, Ryan, Burke and Hopkins, 1999).

These issues mirror the distinction that can be drawn between first, those situations where qualifications, considered as a certificate of competency, are required to perform a given job, either because of the inherent requirements for effective performance of the work or because of externally imposed requirements (such as legislative requirements) and second, where employers opt for training, either accredited or not, for existing workers (where accredited means training which leads to a formal qualification issued under the

AQF). The current research project is concerned with both situations, since they form potential end points to a continuum of employer decision-making options.

In an earlier study Ridoutt, Dutneall, Hummel and Selby Smith (2002) focused on employers' expectations with respect to the outcomes of training. It noted inter alia that: not all competencies are the same; training effort is largely aimed at achieving specific competence outcomes, through a variety of forms; employers possibly take a risk management approach to training and assessment; and the demand side of training is often poorly managed (for further details see Ridoutt et al, 2002).

Not all units of competency are treated equally by employers. There are at least two ways employers differentiate between competencies, first between critical jobs (Cutler, 1992) and second, within jobs, between those competencies considered more critical to productivity (Payne, 2000). In a previous study, employers seemingly targeted four main types of competencies for recognition: competencies associated with 'tickets' and licences conferred by non-training bodies; competencies associated with training and assessment; competencies associated with occupational health and safety; and competencies that were job specific (Ridoutt et al, 2002).

As well as treating various competencies differently the authors noted that a large number of competencies were identified by employers as required for jobs to be performed well, significantly in excess of what was needed to obtain a qualification at an AQF level appropriate to the job. A surplus of competencies to the formal competence requirements of jobs appeared to be regarded as a good workforce characteristic; and advantageous to the enterprise, the individual worker (either in this enterprise or elsewhere) and society more generally.

OECD (2002) hypothesise that it is not just the breadth of competence that facilitates efficient labour movement. They speculate about individually held competencies which they term "wider human capital", the possession of which enables the worker to build, manage and deploy "basic" human capital (the latter being akin to the four types of competencies outlined above as being most likely to require recognition). Wider human capital includes the ability to acquire and develop skills; ability to find the best place to use those skills; and personal characteristics (like trustworthiness) which make people more attractive as employees.

Strong support amongst employers in Australian studies has often been found for so called 'soft' skills or 'support' competencies (eg. Ridoutt and Willett, 1994). A study of the decline of apprenticeship uptake in the electrical industry found that qualifications, or at least courses designed to deliver formal qualifications, were losing their lustre. Many employers were increasingly favouring competence development that delivered 'the operative who can handle uncertainty and solve problems' (NECA, 1998, p. 23). Similarly, research conducted for ANTA's national marketing strategy found that generic skills (as compared with "job-specific skills") were more popular with employers,

especially in enterprises with turnover greater than $5 million (The Research Forum, 2000). The ACCI and the BCA report to the Commonwealth Government on the employability skills needed by industry (in addition to job-specific or relevant technical skills) (Department of Education, Science and Training, 2002) emphasised the importance of workplace skills such as communication, teamwork, problem-solving, initiative, planning and organisation; and that business and industry now require a broader range of skills than those in the Mayer Key Competencies Framework which was developed in the early 1990s. Billett has also considered the appropriate strategies for the effective practice of workplace learning (Billett, 2001). However, the concept of 'generic', 'support', 'employability', etc. skills is not without critics: for example, see Cutler (1992) and Payne (2000).

Blandy, Dockery, Hawke and Webster (2000) concluded from a review of overseas studies in the United States of America, United Kingdom and Europe that informal learning and training methods, on and off the job, were regarded by many businesses as generally superior to formal classroom training. And a study by Figgis, Alderson, Blackwell, Butorac, Mitchell and Zubrick (2001) examining enterprise cultures of training and learning, found that when people in enterprises described their experiences of training and learning, the outstanding feature was how important 'informal' processes were to them. 'Informality' referred to two different aspects of learning and training. First, it referred to the specificity of the outcomes expected. Secondly, there was the formality (or informality) of the guidance given to the learner. Of course, an enterprise's interest in informal approaches does not mean that formal approaches to training and learning are denigrated – almost all of Ridoutt et al's (2002) case study enterprises used both.

Harris, Simons and Bone (2000) concluded that work and learning are inextricably interlinked, and shape each other in a dynamic interrelationship; for example, when trainers structure and manipulate work processes to accommodate employee learning. They found that 'informal' workplace training (and learning) was very common, judging from the overall frequency of trainer actions reported by respondents and that there was a high incidence of trainer actions related to encouraging self-direction in learning by employees, and structuring and shaping work processes to accommodate learning. The least frequent 'trainer actions' were those relating to the linking of internal and external learning experiences, particularly the action of liaising with external providers. Similarly, in a study of employers with metal trades apprentices, Ridoutt and Willett (1994) found that most of them had little idea of what was being supplied to their apprentices in their off-the-job training and felt powerless to synchronise their production needs with the training of their apprentices. The Allen Consulting Group (1999) found successful enterprise-RTO relationships were built where the enterprise understood their core business (which was not training) and sought out like minded education and training providers with whom they could design focused training programs in partnership. In the Harris et al study, it was primarily work that shaped the learning, and the learning network that shaped the role of the workplace trainer. Trainers in different enterprises developed different ways of working. However, effective workplace trainers were aware

of the impact of the work network on learning in their enterprise and how the work network could be shaped and reshaped by their actions in supporting learning.

A four-fold taxonomy, which differentiated between competencies on the basis of assessment methodology rigour and the 'fit' within the parameters of a relevant training package, was developed by Ridoutt et al (2002). Group A included competencies employers sought to have recognised by AQF level qualifications and statements of attainment against the qualifications frameworks within an existing relevant training package. Group B covered those competencies that employers wished to have assessed in their workplace, but for which recognition as a formal qualification was not required. Competencies were formally assessed in a structured manner against a standard. Group C included competencies that the employer determined as not requiring formal assessment. These competencies were assessed through subjective judgement, generally did not involve a structured process and were not referenced to a standard. Group D included any other competence requirement that was not covered or defined by any existing competency in a training package in the Australian VET system. They included competencies or part competencies ('competency fragments') that were not appropriately defined or covered for the particular workplace, or where for some other reason, workplace assessment was difficult. Social, attitudinal or behavioural competence, or other non-defined 'technical' competencies, also appeared in Group D. Although these categories received acceptance from employers, who were readily able to grasp the categories and with whom a shared meaning was generally able to be established, they are consistent with the conclusion of Toop, Gibb and Worsnop (1994) that any assessment system is highly "context bound".

It was the concept of non-formal assessment which caused the most consternation. All of the ambiguity associated with the terms 'informal' and 'unstructured' with respect to training also attends the assessment process. In truth though, the terms are probably used in both training and assessment contexts as proxies to describe and gauge the level of assessment effort, the assumption generally being that 'formality' and 'structure' equate with high levels of assessment effort and methodological rigour.

Authors commentating on assessment and recognition of prior learning (RPL) issues early in the history of the training reform agenda were seemingly quite keen to discuss the mechanics and the merits of a risk management approach (VEETAC, 1993; Gonczi, Hager and Athanasou, 1993). For instance, Gonczi et al were strongly of the opinion that there is no universal method of performance assessment, the process is largely one of balancing conflicting demands and compromising fidelity, and that compromise will typically involve trading-off acceptable costs of testing against the costs of error in judgement. VEETAC argued that "...claims for recognition for a few units of competency represent low risk situations because further training and, by extension, further assessment will be required" (VEETAC, 1993, p. 18). This conceptualisation of 'risk management' is likely to have more resonance with VET practitioners than with enterprise managers, but it still introduces the possibility of varying rigour in the assessment process, specifically the amount and quality of evidence required; and the

involvement of more assessors to make the final assessment decision. The higher the risk and the more adverse the consequences, the more important becomes the assessment process and the more likely it is that a formal recognition pathway will be sought. Clearly, many employers favour a risk management approach to assessment of competence, which essentially seeks to locate assessment effort in relation to cost on the one hand, and validity on the other (Ridoutt et al, 2002).

It might be expected that formality in training (exemplified, for example, through higher structuring of training effort, use of 'qualified' trainers or a relationship with a registered training organisation) would be accompanied by a similar approach to assessment processes. In fact, Ridoutt et al (2002) found a much less precise relationship. While formal training was strongly associated with formal assessment, it did not follow that unstructured or informal training was associated with informal types of assessment. Indeed, the enterprises whose training effort was largely unstructured were, in general, associated with higher levels of formal assessment than those enterprises adopting a largely structured training approach.

Long and Fischer (2002) examined the role that examination of leading edge firms can play in detecting changes in the demand for training. Leading edge enterprises were defined as those at the forefront of their industry in terms of growth or market share and which had extended their activities to international markets. Long and Fischer drew several implications from their case studies. For instance, flexibility of production, the ability to operate with shorter production runs, can provide a competitive advantage in the domestic market but is more demanding on the skills of the workforce. Flexibility and multi-skilling had been a condition of the survival and expansion of both the enterprises they studied. Also, the introduction of flatter management structures and work teams had increased the need for management training among a far broader category of workers than was previously required. Burke, Costello, Malley and Shah (1998) found, in their study of leading edge enterprises in a number of industries, that training for skills in new technology areas was, in the first instance, usually provided on an in-house basis by established training departments. Moreover, each enterprise had experienced deficiencies in the existing institutionalised systems of training with regard to meeting new skill requirements.

Finally, Hall, Buchanan and Considine (2002) have argued that employer behaviour in relation to training should be considered through the notion of skill eco-systems; and thus not solely in the context of the individual enterprise. They define skill eco-systems as clusters of high, intermediate or low-level competencies in a particular region or industry, shaped by inter-locking networks of firms, markets and institutions. They argue that any national approach to employer funding for education and training should promote collaborative arrangements between employers, unions, training providers and workers within regionally and industrially defined labour markets. They also emphasise that, where employers invest in training, they are more likely to value the skills that result and more likely to ensure that those skills are used and deployed to productive ends.

Thus, despite the VET focus on qualifications as the primary (even exclusive) means of assessing the outcomes of training, a broad acceptance has been emerging that they represent only the tip of the iceberg in terms of training conducted in most Australian enterprises, and certainly only a fraction of the actual skill acquisition outcomes (Daly, 1991; Hager, 1997; Black, 1997; DEETYA, 1998). Accordingly, evidence is mounting that stakeholders outside the VET system, particularly employers, do not value qualifications as much as those stakeholders inside the system (Miller, Acutt and Kellie, 2002; Ridoutt et al, 2002). Instead, large and small employers seek outcomes from training (and assessment) consistent with the perception of their business needs and how competence contributes to satisfying those needs (including minimising risks).

3. Methodology

The initial methodology included four sequential steps to facilitate the design of the survey instrument: semi-structured interviews with major employer groups (such as ACCI, Australian Business Ltd., VECCI, the Australian Industry Group, the Australian Retailers' Association, and the Plastics and Chemical Industry Association); a literature review; a mailed questionnaire survey of employers; and focus group discussions. In view of a number of issues that arose following the interview process, greater research effort was devoted to the design of the questionnaire instrument and the further research process.

After discussion with NCVER, who were funding the project, a revised research methodology sequence was adopted. It would include eight stages: semi-structured interviews of major employer groups (Stage 1); focus group discussions to sharpen the research questions and questionnaire design (Stage 2); specific literature review informed by the focus groups (Stage 3); focus group discussions to validate the draft questionnaire design (Stage 4); pilot testing of survey instrument (Stage 5); mailed questionnaire survey of employers (Stage 6).

The response rate to the mailed questionnaire survey, based on first round responses with no non-respondent follow up, proved to be poor (effectively about 10%). In summary, it appeared to result from a combination of five factors: a poor mailing list, with many out of date records in the database (a high number of questionnaires were 'returned to sender'); a large and complex questionnaire; increasing employer reluctance to respond to surveys, compounded by the downsizing of many Australian enterprises; lack of an incentive to respondents in the form of a prize (which is becoming the norm with many commercial survey researchers); and insufficient promotion of the survey from sources which were credible with employers.

Following further discussion with NCVER, it was decided to complete more surveys through telephone interviews; and simplify the survey questionnaire where necessary. Hence the final two methodology stages of the study became: telephone interview of employers (Stage 7); and analysis of qualitative (interviews and focus groups) and quantitative (mail and telephone surveys) data, interpretation and reporting (Stage 8).

In the initial stage nine interviews were conducted with senior members of selected national and state employer organisations. (The person and associations interviewed and the interview schedule are at Appendix A and B respectively in Ridoutt et al, 2005.) The aims of the interviews included: seeking views on a range of possible questions and terminology likely to be used in the questionnaire; exploring what dissemination approaches would be most appropriate; and seeking to create a 'partnership' relationship with employers in the research project. The partnership would, at the minimum, be to the benefit of the researchers. Ideally though, the organisation would contribute to research processes (e.g. questionnaire design, sampling framework) and profit from the research results. The level of interest among the interviewed associations varied. Some exhibited a strong desire for a partnership arrangement, while at the other extreme some associations were indifferent to the research agenda (and possibly to any research involving their membership). Those that were most interested in a partnership relationship contributed to the research design, commented on the survey instrument(s), helped arrange focus groups of members and incorporated a newsletter item encouraging participation in the survey.

Several focus groups were organised through the auspices of the industry associations. They were conducted in two stages. First, there were exploratory group discussions prior to attempts to design the questionnaire. These discussions were primarily aimed at understanding how employers might most easily and clearly understand certain potentially difficult conceptual areas such as enterprise risk, human resource management decisions, factors determining enterprise size, even the concept of 'qualifications' itself. Later, there were confirmation group discussions, after initial questionnaire design efforts. These discussions were primarily aimed at consolidating design features and making adjustments to the content of particular survey questions.

The final paper questionnaire is at Appendix E of Ridoutt et al (2005). The final draft was discussed with three focus groups of employers, including two metropolitan and one non-metropolitan employer group. Following this input and the extensive field testing which had already taken place, the questionnaire was finalised and commissioned. Opportunity for further input by NCVER and the Statistical Clearing House (Australian Bureau of Statistics) was also provided prior to administration of the survey. As noted earlier, given the insufficient response rate, the researchers later undertook to seek further responses through telephone interviews. This required some modification to the original survey instrument (see Appendix F of Ridoutt et al, 2005). A summary comparison of the mailed questionnaire survey instrument against the telephone interview instrument is provided in Ridoutt et al, 2005, Appendix A, Table 5, pp. 40-41).

The target population was enterprises in selected Australian industries. A sample population was constructed on the basis of two variables: industry sector; and size of enterprise. The six industry sector strata were manufacturing; retail and wholesale; education and training; construction; transport; and commercial services. The three enterprise size strata were: < 50 employees (small); 50 - 199 employees (medium); and 200 or more employees (large). The two main variables for sample stratification were

chosen since these had been shown in previous studies to be strong influences on training activity, especially formal training.

The required sample size was estimated in the following way. Taking one industry sector as an example (manufacturing, which is the largest), the total *n* from the sample frame for say enterprises of < 50 employees is 11,670 (as derived from Australian Bureau of Statistics data). If the frequency of key variables under study is expected to be 20%, the relative standard error 15% (a little high, but acceptable with the uncertainty around the variables), and confidence levels set at 95%, then the required sample *n* should be 27. The calculated sample *n* varies between industry sectors depending on the actual population size in each cell (that is, the intersection of industry sector and one of the three employer sizes), but is consistently within the range 24 - 27. Thus, the minimum sample size estimated as required for each 'cell' for analysis was 25 (on average). If the likely response rate is estimated as approximately 50%, then a sample *n* of 50 should be sufficient for each strata. Given there were 18 'cells' created by the sample selection criteria (6 industry groups x 3 enterprise sizes), this provided a total sample population requirement of 900.

Integral to the decision to complete the research study when faced with the poor response to the mailed questionnaire survey was an acceptance that analysis by industry sector might need to be sacrificed. This effectively reduced the sample population to three cells (that is, three enterprise sizes), and therefore the required sample size from 900 to 150. In the final analysis, between the mailed questionnaire and the telephone interview process, that is how many responses were gathered, distributed between industry sectors as shown in Table 1.

Table 1: Distribution of Organisations by Industry Sector

Industry Sector (ASIC main classifications)	**Number of Companies Surveyed**	
	Mailed Q'aire survey (n = 81)[1]	Telephone interview survey (n = 69)[2]
Agriculture, forestry and fishing	2	1
Manufacturing	30	30
Construction	6	5
Retail / Wholesale trade	3	2
Transport and storage	12	20
Finance and insurance	1	-
Cultural and recreational services	9	-
Education and training	3	7
Electricity, gas and water	1	1
Accommodation, cafes and restaurants	1	2
Communications services	1	3
Property and business services	8	2
Health / community and Personal services	3	3

Notes:

1. Some respondents did not identify their industry. Hence, the number of industries is less than the sample population.
2. In the interview process several respondents took the opportunity to self -identify as belonging to more than one industry sector. Hence, the number of industries totals more than the sample population.
3. 90% of the enterprises were in the private sector (85% were for-profit and 5% not-for-profit enterprises) and 10% in the public sector (7% were commercial enterprises and 3% were other public sector enterprises).

Two industry sectors (manufacturing; and transport and storage) dominated the survey population, accounting for 40% and 21% respectively of the total population. All other industry categories combined accounted for only 39%. The study originally intended to survey respondents from a wide range of industries. However, when the research was redesigned, a smaller number of industries were targeted for the telephone interview. Consequently the industries were collapsed into the following meta industries: construction; manufacturing; transport; service; and other. The retention of these differing sectors allows for some interpretation of the results by industry sector.

The project was intended to have a sample population which was representative of the States and Territories. In the event, Table 2 shows that the sample population had a strong bias towards NSW and Victoria (and, to a lesser extent, Queensland). These are, of course, the three States with the largest populations.

Table 2: Respondents by State/Territory

State/ Territory	Respondents		Population
	Frequency (n=148)	*%*	*%*
NSW	58	39.2	33.6
VIC	43	29.1	24.6
QLD	20	13.5	19.1
WA	13	8.8	9.8
SA	9	6.1	7.8
TAS	2	1.4	2.4
ACT	2	1.4	1.6
NT	1	0.7	1.1
Total	148	100.0%	100.0%

Table 3 shows the survey sample by enterprise size. There is representation from enterprises of all size categories in both the mailed questionnaire survey and in the telephone interview survey. Overall, the proportional representation of small (48 % and 34%), medium (25% and 29%) and large (26% and 36%) sized enterprises favours the smaller sized enterprise population. However, the distribution is sufficient to allow

analysis by enterprise size. More detailed information about the sample population is contained in Appendix 2 of Ridoutt et al (2005).

Although the response rate precluded detailed analysis by industry category, the sample population response for most questions, especially those where the mailed questionnaire and telephone interview data were comparable, was more than acceptable for analysis of 'enterprise' perspectives, even by different size categories. This presumes, of course, that there were not systematic differences of substantial size between responding and non-responding enterprises in relation to the factors being investigated.

Table 3: Distribution of Organisations by Enterprise Size

Enterprise Size (number of employees)	**Number of Organisations Surveyed**	
	Mailed Q'aire survey (n = 81)	Telephone interview survey (n = 69)(1)
under 20	16	13
20 – 49	22	11
50 – 199	21	21
200 – 500	8	10
> 500	13	15

Note: (1) In the interview process respondents had the opportunity to self -identify as belonging to more than one enterprise size. Hence, the number totals more than the sample population.

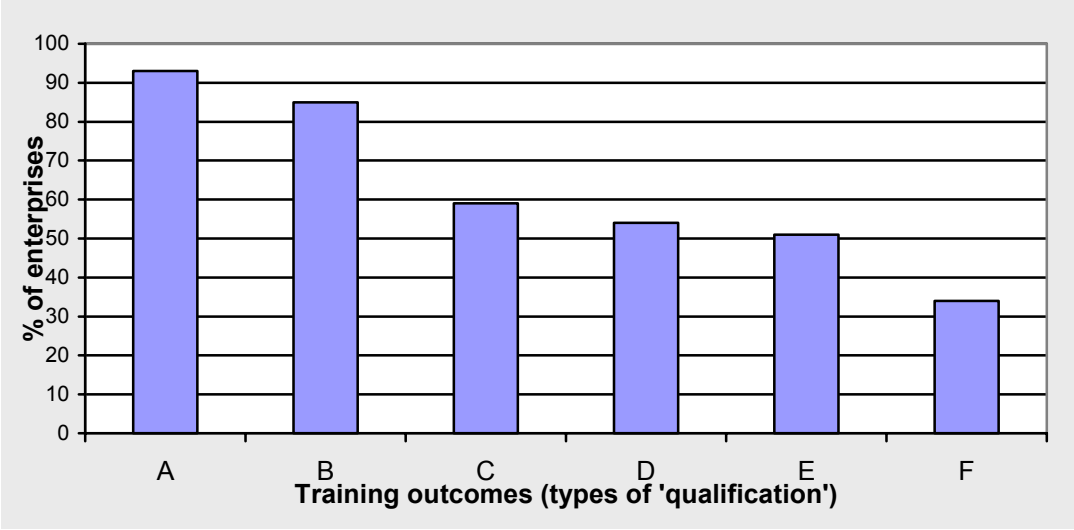
Analysis in most cases, was through simple frequency distributions and cross tabulations. Where appropriate, statistical tests were applied to test the significance of observed differences in means between categories. A content analysis of the information collected through interviews was also undertaken, with the information being partially 'processed' into broad areas of interest that mirrored the information requirements relevant to the research questions, such as attitudes to qualifications and what they mean; attitudes to assessment; organisational culture; approach to risk management; and perceived differences between jobs/roles and competencies in respect to risk.

4. Findings

What is a qualification? First, employers were asked what they regarded as a qualification. Generally, they agreed that a 'qualification' is signified by some form of documentation. When this was not the case, employers viewed the university and RTO qualifications, as not a qualification (in the organisation) because they were not relevant to the particular job being performed. Figure 1 shows that certificates and diplomas from TAFE and other registered training providers, and university degrees topped the list of recognised qualifications (although even they were not universally accepted). A wide

range of other achievements were also accepted as 'qualifications', with even certificates of attendance considered a qualification by 34% of respondents. Only 9% of the surveyed enterprises identified accomplishment that fitted a person for a job role (such as "extensive experience") as a qualification without supporting documentation. The type of documentation varied; and there were significant variations between employers. For example, the Professional Association of Diving Instructors certificate or IT vendor training were widely accepted as qualifications by employers in the respective industry areas.

Figure 1: Employers Accepting the Particular Training Outcome as a "Qualification" (N=150)



Notes:

(1) Key to training outcomes:

- A = TAFE, RTO or equivalent and trades qualifications certificates, diplomas, advanced diplomas
- B = Degrees conferred by a university or equivalent
- C = Licences, 'tickets', etc provided by non training bodies
- D = Certificates of school achievement
- E = Industry training awards
- F = Certificates of attendance or other recognition provided for participation in a course

(2) TAFE = technical and further education; RTO = registered training organisation

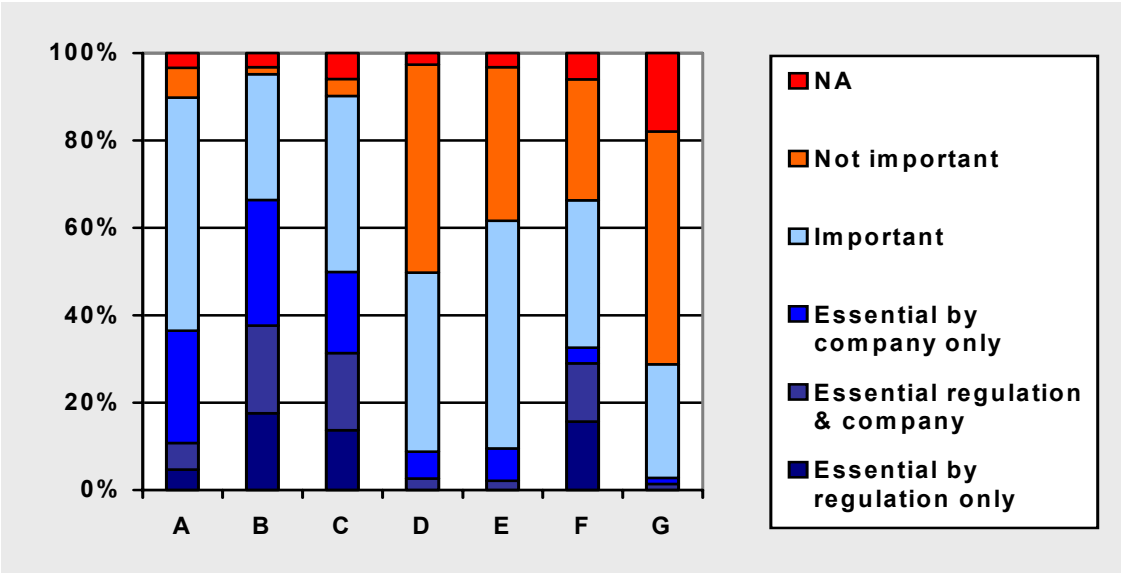
Formal qualifications compared to experience: Most employers rated experience higher than formal qualifications in many decision-making contexts (where 'experience' was generally equated to skill, forged over a significant period of time in relevant workplace circumstances). For instance, in managing their number one risk, 72% of employers believed skill/experience were critical, whereas only 36% believed formal qualifications were a critical control measure. Another example was the larger proportion of enterprises

that ascribed high importance to evidence of skills in much human resource management decision-making compared to formal qualifications. Ridoutt et al (2002) found that employers focused on a comparatively small number of critical competencies, which concerned the skills which were most important in controlling their primary business risks, so that the employers were (at best) valuing 'part' qualifications, that component which delivered the skills they valued.

Interestingly, some of the employer respondents found it difficult to articulate exactly what skills they took into account. Experience that was identified as important included: staff leadership; team skills; communication skills; business leadership; capacity to offer pastoral care; willingness to learn; and capacity to cope with change. 'Attitude' was frequently mentioned as a desirable characteristic, and variously translated as "being progressive", "positiveness", "appearance", "at least making an effort to understand and adjust to company norms", "confidence", "demonstrations of commitment" and "wanting to do the job, wanting to be there".

Qualifications for different categories of worker. Employers differentiated the importance of qualifications for different categories of worker. 89% of respondents classified formal qualifications as important or essential for technical, professional and managerial staff; two-thirds for operators, drivers, sales and clerical staff; and only 29% for labourers. The same pattern applies in reverse, with over half the respondents for labourers compared to less than 10% for technical, professional and managerial staff considering formal qualifications 'not important'. The findings are consistent with those of Miller et al in their survey of British employers (Miller et al, 2002).

Figure 2: Importance of Formal Qualifications for Different Occupational Groups (N=150)



Notes:

(1) Occupational Groups:
A = Managers and supervisors
B = Professionals
C = Technical support
D = Clerical and administration
E = Sales and related services
F = Plant and machine operators and drivers
G = Labourers

(2) The rating choices were: essential (required by regulation); essential (required by company policy); important/very important; and not important. The first two items were included to cover the possibility that for some categories of employee, a major driver of qualifications was government legislation.

Qualifications for different human resource management decisions. Employers perceived the importance of qualifications differently when making various human resource management decisions. Table 4 shows that the enterprises thought formal qualifications were 'important' or 'very important' when planning for future skill and training needs and to recruit new employees (nearly 90% of respondents) and when planning training and ensuring employee competence (around 80%), while for compliance with OH&S laws, to make promotion decisions and to determine levels of remuneration and other benefits, formal qualifications were judged rather less important (at 75%, 73% and 67% of the respondents respectively). Overall, however, formal qualifications appeared to most employers to be important or very important in relation to all of these human resource management decisions.

Table 4: Importance of Formal Qualifications for Different Human Resource Management Decisions (%)

Types of human resource management decisions:	Very important	Important	Not important /NA
To plan for future skill needs of the organisation	31%	56%	13%
To recruit / select new employees	34%	55%	11%
To comply with relevant occupational health & safety laws	32%	43%	25%
To plan training and ensure employee competence	32%	49%	19%
To make promotion decisions	17%	55%	27%
To determine levels of remuneration & other benefits	17%	50%	33%

A distinction was made between 'external' and 'internal' human resource management decisions by participants in focus group discussions and by persons who were interviewed. Planning for an enterprise's labour requirements and scanning the labour market, and then recruiting to meet requirements, are 'external' human resource management decisions, since they involve engagement with forces and systems outside of

the enterprise. It was suggested that formal qualifications are most important in relation to actions at the interface between an enterprise and the external labour market, since they offer a more stable 'currency', which provides the decision-maker with additional information in a situation which can be information poor (see also Keating, 2002). Qualifications were considered important by 90% of respondents when making human resource planning and recruitment decisions. Respondents also noted that the importance of formal qualifications is influenced by the stage of the career of the person being recruited: persons later in their employment career tend to be judged more on experience and skills than on their formal qualifications (see also Wooden and Harding, 1997).

Qualifications and risk management. Since formal qualifications provide an objective, externally validated form of assessment of knowledge and skills, employers may seek them for staff who are managing high risk areas of their enterprise. Focus group participants and other interviewees tended to agree that employers are continually assessing the risks of incomplete competence and making judgements about the worker's need for competence, and their level of competence, in relation to various risks to the enterprise. At a simple level, for example, employers allocate the more 'crucial' tasks to selected, competent employees. Table 5 sets out the thirteen types of risk most frequently identified in employer responses, noting the proportion of respondent employers who rated them as significant (generally quite high proportions), the proportion who rated each as 'high risk' (lower, more variable, but still substantial: above half in four, above 40% in six and above 30% in nine of the thirteen areas), and the proportions who rated 'training or experience' or 'formal qualifications' as important in managing the risks. Many more employers saw training or experience as important for managing their business risks than formal qualifications among their employees. This was so in every risk area without exception. In relation to 'formal qualifications' in only two risk areas did more than one-fifth of employers rate them as important for managing business risks ('OHS compliance' at 58% and 'Legislation/government requirements' at 49%). The results do not support the idea that formal qualifications are widely seen as an efficient way of effectively controlling for important business risks. However, where formal qualifications *were* seen as valuable for this purpose, the qualitative responses focused on

- specific knowledge gained ("expertise and knowledge");
- the qualities achieving a formal qualification was thought to demonstrate ("dedication", "methodical", "breadth and depth", "ability to think outside the square"); and
- potential litigation, liability and regulations as key drivers.[1]

Variations between enterprises. First, the data were examined for differences between enterprises of different size. Smaller enterprises might perceive a lesser requirement to

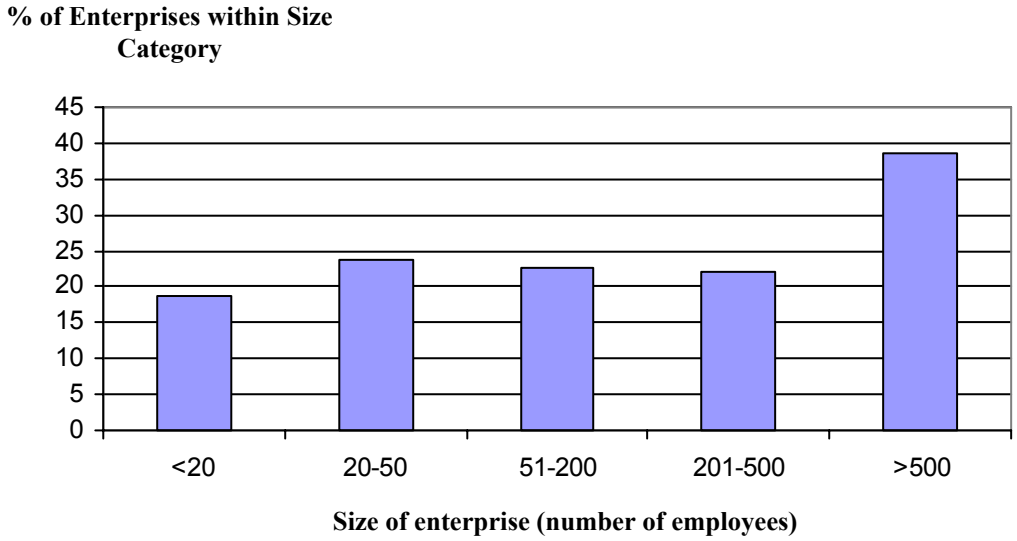
[1] Relatedly, almost half of the employer respondents practised some form of risk management in selecting their assessment methodology: no assessment for skills of employees managing high risk areas (14%); unstructured assessment (70%); structured formal assessment (58%); and external assessment (36%). Formal qualifications might be part of the risk control approach adopted by these employers.

have employees with formal qualifications, since the competence of each employee tends to be well known to senior management and the owners of the enterprise. SMEs may also prefer a closer correlation in time between enterprise investments, including in education and training, and the related returns. Figure 3 suggests a divergence between enterprises of different size, with respondents from the largest enterprises being more in favour of an overall support for employees holding qualifications; but among smaller enterprises there did not appear to be any great difference. Interestingly, the proportion who preferred all workers to hold an appropriate qualification was, nevertheless, less than forty per cent for the largest enterprises (and less than 25% for the remainder).

Table 5: Organisations Identifying Item as a Risk or a High Risk; and whether 'Training or Experience' and 'Formal Qualifications' were Important in Managing that Risk (%)

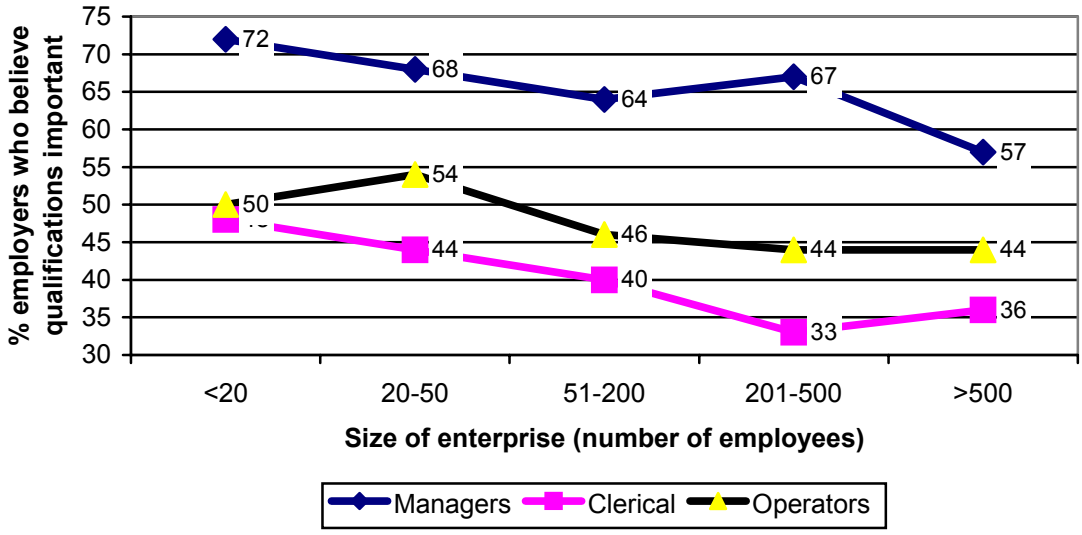
Type of risk	Risk	High Risk	Training or Experience Important	Formal Qualifications Important
Non compliance with legislation/government requirements	94	74	70	49
Insufficient insurance	88	58	42	16
OHS compliance	93	67	65	58
Loss of contract/funding	74	28	19	3
Loss of client/customer base	88	55	41	12
Loss of core knowledge/skilled personnel	87	38	33	20
Quality of product (or service)	81	42	42	19
Obsolete technology	68	17	14	7
Risk to professional reputation/standing	84	43	38	13
Risks to competitiveness	91	35	29	13
Critical incidents	77	38	33	16
Supply chain disruptions	70	23	13	4
Failure/absence of critical machines/processes	64	25	22	10

Figure 3: Enterprises in Each Size Category who Prefer all Workers to Hold an Appropriate Qualification (%)



However, when enterprises of differing size are compared with respect to the importance they give to qualifications for those in selected employee categories (such as managers, clerks, or plant operators) small businesses appear to be at least as interested in their employees holding formal qualifications as larger enterprises. These responses are summarised in Figure 4.

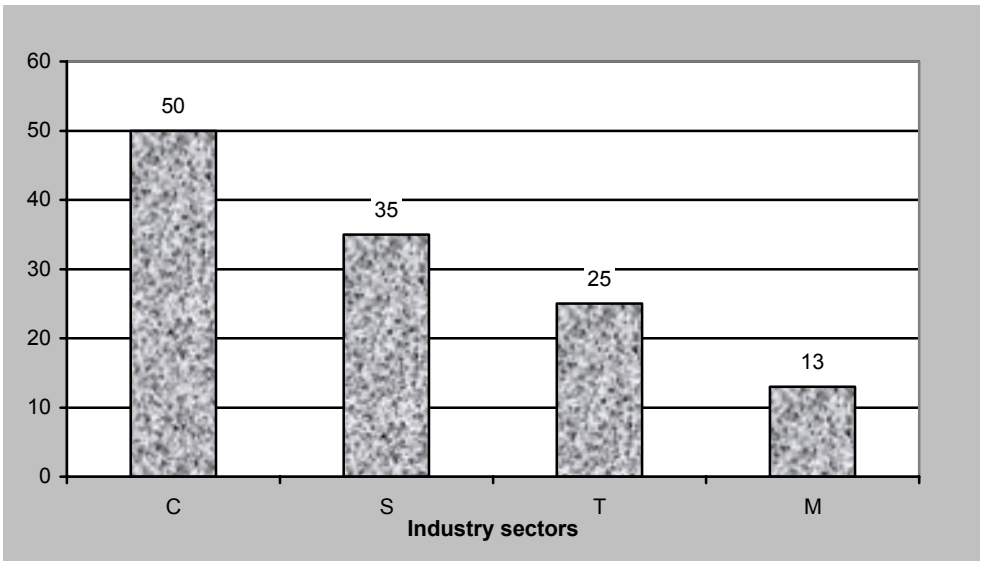
Figure 4: proportion of employers who believe qualifications are important to be held by their employees, by employee occupational category



Secondly, there are differences between industry sectors in the proportion of employer respondents who indicated that all employers should have qualifications. However, these differences are not statistically significant; and enterprise commitment to a "blanket" preference for qualifications may only indicate an industry sector discriminating sensibly and rationally with respect to their training investment in particular worker categories and outcomes. The favourable view of formal qualifications among construction industry enterprises may reflect the increasingly regulated nature of the industry and its traditionally strong base of trades people.

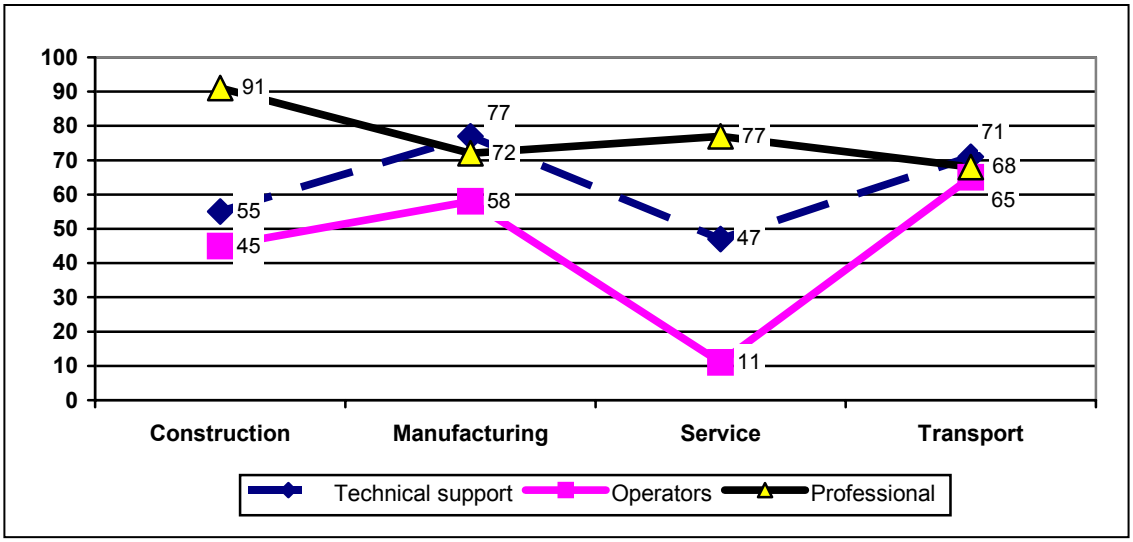
The industry sectors also differed in the importance they placed on employee qualifications in various employment categories. For example, Table 6 shows that in the service industry, nearly four-fifths of responding enterprises identified qualifications as, at least, 'important' for professional employees, but only 47% and a low 11% of enterprises thought formal qualifications were important for technical support and operator personnel respectively. On the other hand, in manufacturing industry the highest proportion of enterprises perceiving formal qualifications to be important (77%) did so with respect to technical and trades employees. Interestingly, only 47% of service sector, 55% of construction, 71% of transport and 77% of manufacturing enterprises who responded believed that a formal qualification was important for their trades people and technical support employees (ie. 53%, 45%, 29% and 23% respectively, did not). No obvious difference was apparent on a range of enterprise characteristics between those enterprises which did, and those which did not, think formal qualifications were important for their employees.

Figure 5: Proportion of Enterprises from Different Industry Sectors who prefer all Employees to Possess Qualifications (%)



Note: C = Construction; S = Service industry; T = Transport industry; M = Manufacturing.

Figure 6: Enterprises in Different Industry Sectors Identifying Qualifications as 'Important' or 'Critical' for Selected Worker Categories (%)



Thirdly, some respondents, critical of traditional ways of breaking industries into sectors, argued that enterprises should be divided into 'old economy' and 'new economy' enterprises. In old economy enterprises, characterised by traditional methods of operation, the processes of production may not have changed for years. In this case, it was argued that factory floor training adds little to business success, since stable (and competent) staff are already in place; training would be targeted at management, where higher value adding opportunities are seen to exist. By contrast, new economy enterprises are innovative and the processes of production are still evolving. In this case, it was argued, less structured and formal (but appropriately timed) training is important, targeted to specific jobs and tasks, and encouraged across the workforce. The issue is considered with respect to enterprises, first in different states of change and second, at different levels of innovativeness.

In terms of states of change, enterprises were classified, on the basis of their survey responses, into three categories: low change (65%), medium change (21%); and high change (14%). An enterprise's level of change was derived from the cluster of its responses to four attribute questions: "an organisation where change to culture/practices is driven by a major customer" (25 respondents); "currently in, or emerging from a recent significant structural organisation change" (N=43); "feeling the effects of a recent discrete organisation change" (N=25); and "subject to significant technical change" (N=21). Enterprises were grouped into 'low', 'medium' or 'high' levels of change according to whether they identified with less than two, two, or more than two of the above circumstances respectively. Figure 7 shows the relationship which was obtained between the enterprise's state of change and its desire for all its employees to hold formal qualifications. Contrary to what might be expected, enterprises in a high state of change

did not show a higher preference for employees to hold qualifications than the enterprises which were undergoing less change. In fact, the reverse was true, although the difference was not statistically significant.

Figure 8 shows that a similar relationship held for enterprises classified according to their innovativeness (although again the relationship is not statistically significant). 47% of the total respondents were at the medium level of innovation, 34% low and 18% high. Levels of innovation were constructed from the cluster of enterprise responses to three attributes: high technology (37 respondents); leading edge practitioner (N=37); and leading innovator (N=50). Where all three attributes were present, the enterprise was classified 'high', where two were present, the enterprise was classified 'medium' and with less than two as 'low'. The highly innovative enterprises indicated a lower preference for all of their employees to hold an appropriate qualification than those enterprises whose innovativeness was classified as medium or low. Apparently, high change and highly innovative enterprises tend to act similarly, but rather differently from what the conventional wisdom presumes.

Figure 7: Proportion of Enterprises in Different States of Change who preferred all their Employees to Possess Qualifications (%)

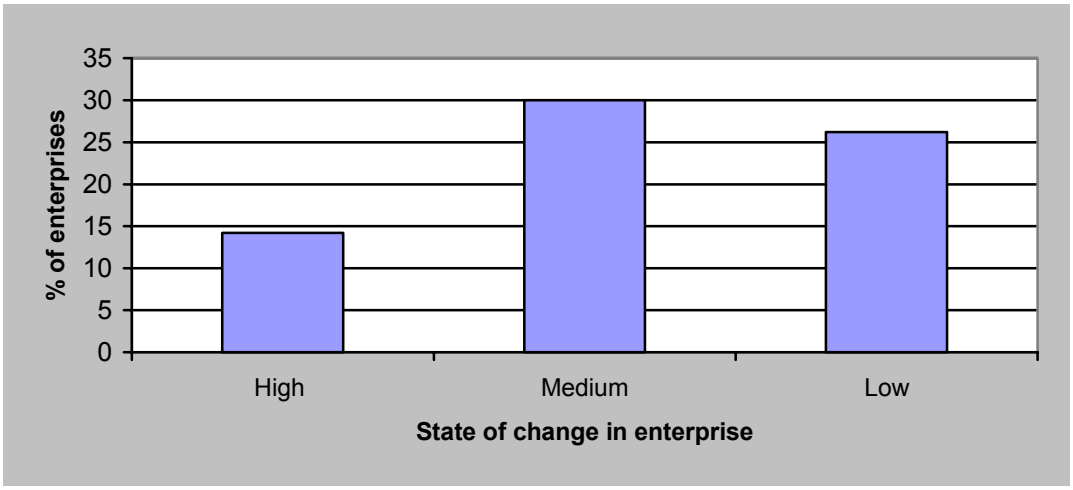
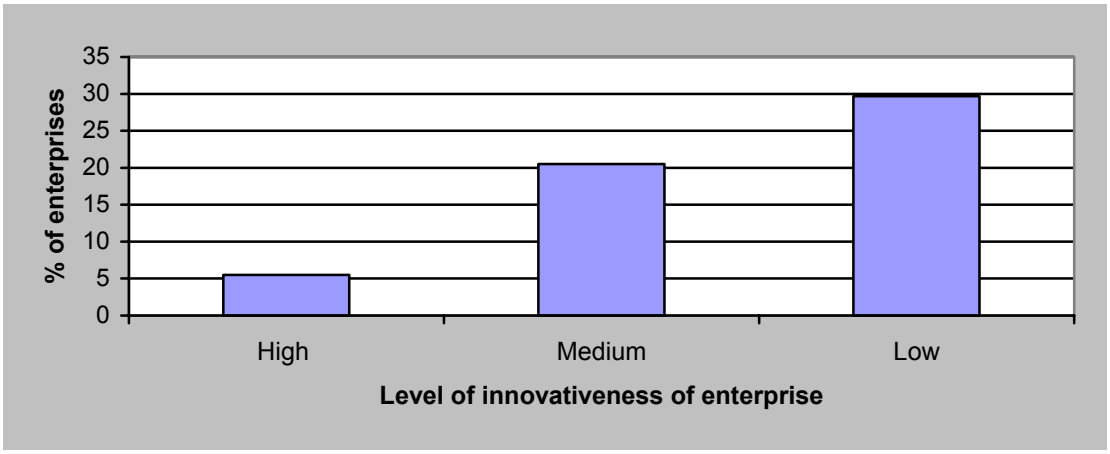


Figure 8: Proportion of Enterprises at Different Levels of Innovativeness who prefer all Employees to Possess Qualifications (%)



Conventional wisdom presumes that enterprise innovation and change tend to be associated with the 'new knowledge' based industrial and business development, supported by broad human capital investment (including high proportions of appropriately qualified staff: OECD, 2002). The evidence from the present research project suggests a rather different interpretation. Since innovative enterprises are part of the new economy, where the processes of production are continuing to evolve, less structured, less formal, but appropriately timed training, very specific to emerging jobs and tasks, is particularly important. It is a 'just-in-time' approach to training and learning, that adjusts the pace of skills development to the pace of the enterprise's organisational change and contextual development (see Burke et al, 1998). Leading edge enterprises tend to be knowledge makers and, as a result, less able to benefit from formal VET qualifications (Long and Fischer, 2002). Indeed, the relationship may be reversed, with those designing VET qualifications and constructing VET courses being the beneficiaries of productive explorations and knowledge generation by innovative enterprises.

5. Conclusions

There appeared to be five main conclusions from this study. First, while 90% of the respondents valued qualifications in at least one circumstance in managing their business, less than a quarter treated qualifications as something to be appreciated without question. Respondents tended to ascribe value to qualifications insofar as they supported business decision-making or operations and added to the security and prosperity of the enterprise. The respondents also differentiated between circumstances where they saw greater or lesser benefits from their employees holding an appropriate qualification; and they drew a strong distinction between qualifications and experience, with the latter tending to be more valued over a wider range of business circumstances.

Secondly, the employers who responded used qualifications differently by type of employee, nature of human resource decisions, and the type of business risk they were attempting to manage. These relationships were probably influenced by a range of enterprise characteristics, such as their size and state of change or innovativeness.

- 89% of respondents emphasised the importance of qualifications for professional, technical/trades and managerial employees, compared to 60-70% for operators and drivers, sales and clerical staff, and 29% for labourers.
- The respondents used formal qualifications most to plan for future skill and training needs, recruit new employees and ensure regulatory compliance. Other types of human resource management actions, such as remuneration decisions and creating employee loyalty, were less influenced by qualifications considerations.
- While compliance risks and business risks were both considered important by the respondents, the enterprises tended to argue that the former were better controlled by a qualification or through skills development, whereas the latter were more likely to require other approaches.

Thirdly, the larger enterprises tended to support a more comprehensive approach to worker qualifications, perhaps to develop harmonious employee relations, a learning culture and the enterprise's intellectual capital. The smaller businesses tended to be more discriminating when assigning worth to qualifications; and favoured a closer correlation in time between the investment of resources and the returns to the business.

Fourthly, classifying enterprises into 'old' economy and 'new' economy businesses helped to explain the relationships found between the level of change and state of innovativeness of enterprises and their valuing of qualifications. The study findings suggest that high levels of enterprise change and innovativeness are associated with lower support for the value of qualifications (contrary to what might be expected, a priori). Perhaps the explanation is that these conditions translate into a demand for more 'just in time' type skills development, whereas the pursuit of formal qualifications is more long term and strategic.

Finally, while a small proportion of the respondents, below 15%, consistently valued skills and experience above qualifications, a similar proportion of respondents believed strongly in the value of qualifications per se. The remaining respondents (ie. the majority) valued qualifications, but conditionally, based on the circumstances facing their enterprise. From the perspective of VET policy, planning and implementation there is the challenge of ensuring that the complexity of circumstances and options that confront individual enterprises is appropriately matched by the array of training products and services.

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