Towards a Theory of Enterprise Training: Propositions for a Future Research Agenda

ABSTRACT

Research into the training provided by enterprises in recent years has been characterised by broad conclusions drawn from analysis of statistical data on the quantity of enterprise training in the economy. This research, whilst providing general indications of overall trends in training, has failed to illuminate the nature and operation of training at the enterprise level. This paper presents findings from a qualitative study of enterprise training in a number of manufacturing enterprises in Australia. The paper examines the type of training provided in the enterprises and relates the occurrence of training to a variety of independent variables including business strategy, technology, work organisation, industrial relations, management attitudes and the competitive performance of the enterprises. The discussion of the relationship of enterprise training to each of these variables leads to the development of a series of propositions describing the role and nature of training within enterprises which could form the basis for a future research agenda aimed at developing a more comprehensive theory of enterprise training.

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Much of the debate since the mid-1980s over the role of training in improving enterprise competitiveness has been focused at the policy level (Coopers & Lybrand, 1985; Commission on the Skills of the American Workforce, 1990; Allen Consulting Group, 1994). However, as Cappelli (1994) remarks, improvements at the national level can only occur in the context of improving training provision at the level of the individual enterprise. Unfortunately, research into training is most deficient at the level of the enterprise. The evidence that is available has often been drawn from secondary analysis of data collected for other purposes such as the data from the National Longitudinal Survey of Youth in the USA (Lynch, 1991, 1992b; Veum, 1995) or the Labour Force Survey in Britain (Ashton & Felstead, 1995). However, with some exceptions (Pettigrew, Sparrow & Hendry, 1989; Heyes, 1996; Heyes & Stuart, 1996), qualitative evidence is lacking and, as Dyer (1984) has noted in another context, it is the systematic collection of reliable qualitative data that will lead to the development of theory in the field of enterprise training.

This paper reports the results from a study of the role and nature of training in seven Australian manufacturing enterprises. The research analysed the impact of a number of enterprise level variables on the extent and nature of training provided to shop floor employees. The variables included business strategy, technology, work organisation, industrial relations, management attitudes to training and the competitive position of the enterprises. The paper draws together the findings of the research under each of these variables and generates a series of propositions. These propositions describe a possible research agenda, which could lead towards the development of a comprehensive theory of enterprise training.

THE RESEARCH

The research involved seven case studies of manufacturing enterprises in Australia. The case studies were carried out during the period 1992–1995. In order to examine the interaction of the factors that influence training decisions within enterprises, it was important that a high

degree of comparability was maintained between the enterprises in the sample. For this reason, a single industry was chosen—manufacturing. Although individual manufacturing enterprises face a diversity of business environments, a basis for comparability exists in the nature of the manufacturing process, the similarity of concepts of performance (productivity and quality) and the nature of competition. The seven cases were identified from a list of twenty possible manufacturing cases covering the broad areas of automotive, electronics and general manufacturing. The case studies included:

- **Nissan Motor Manufacturing (Australia)**. The Australian subsidiary of the Japanese auto producer that operated an assembly plant and a castings plant in Melbourne. For many years Nissan had been losing market share to the other Australian-based manufacturers and was in severe danger of closure at the time of research.
- **Hella Manufacturing**. The Melbourne-based subsidiary of the German automotive lighting manufacturer. Hella was a monopoly supplier of lighting systems to the Australian automotive manufacturers and did not export any product.
- **Trico**. The Australian subsidiary of an American wiper blade manufacturer based in Melbourne. Trico exported up to 25 per cent of its products to the USA and the enterprise was basing its future strategy on improving performance through a new system of work organisation and increasing its export production.
- **Siemens Australasia**. The Australian subsidiary of the German electrical and electronics multinational. Siemen's principal manufacturing plant was located in Melbourne. Siemens occupied a median position in an increasing competitive telecommunications market in Australia.
- **NEC Australia**. The Australian subsidiary of the Japanese electronics company with a manufacturing plant located in Melbourne. Similar to Siemens, NEC was a middle-ranking performer but was increasing its export activities as part of the globalisation plans of its Japanese parent.
- **IBM Australia**. The Australian subsidiary of the American computer manufacturer. The IBM plant was located at Wangaratta in regional Victoria. IBM exported over 70 per cent of its production in Australia to North and South-East Asia.
- **Dorf Industries**. The Australian owned tapware manufacturer located in Melbourne. Dorf had let its market share slip in the 1980s but was pursuing growth through exports.

The case studies proceeded through a series of interviews with a vertical slice of employees from CEO/General Manager to shop floor employees and the collection of extensive documentary material. This process involved a number of visits to the case study sites with each case study taking approximately seven days to complete. Interviews were transcribed and cross matched with documentary data to enable within case analysis. Cross case analysis was carried out using open coding techniques and a number of visual display techniques that enabled themes to be identified from the cases (Miles & Huberman, 1994).

TRAINING ARRANGEMENTS IN THE CASE ENTERPRISES

The major finding from the case enterprises was the diversity of training arrangements that are to be found at the enterprise level. Training expenditure for the case enterprises varied from 10 per cent of payroll costs in the case of IBM to the minimum stipulated under the Training Guarantee Scheme[1] of 1.5 per cent in the case of Hella. All the case enterprises, however, reported that their expenditure on training had increased in the last 12 months and was likely to increase in the near future. Training expenditure is summarised in Table 1. Case enterprises are categorised as high, medium and low against the average training expenditure in Australian enterprises for 1993 which was 2.9 per cent of payroll (ABS, 1994).

[Insert Table 1 here]

For the purposes of analysis, five dimensions were developed to describe the training arrangements in the enterprises:

- *Formality*. The extent to which training is organised on a systematic basis using needs analysis, design and evaluation.
- *Delivery*. Whether training was delivered on-the-job or off-the-job.
- *Resources.* The extent to which internal or external resources were used to deliver training.
- *Content.* Whether training focused on technical (job specific) skills or behavioural skills.
- *Specificity*. Using the terminology of human capital theory (Becker, 1964) the extent to which training focused on general or specific skills.

The formality of training. With the exception of IBM, the case enterprises had not traditionally adopted a systematic approach to training. This was particularly true at the shop floor level. At levels above the shop floor it was more common for enterprises to identify training needs through some form of analysis. However, this traditional, non-systematic approach to training was beginning to change. Some of the case enterprises such as Nissan, NEC, Siemens and Dorf were adopting formalised, industry-wide training arrangements. For IBM, a formal approach was necessary to cope with the casual system of employment on the shop floor and Trico was formalising its training activities as part of its proposed changes to work organisation. Hella retained an informal approach at the shop floor level. However, progress towards more formalised systems of training was very slow.

Delivery of training. The dominant form of training for shop floor employees in all the case enterprises was on-the-job training. In most of the enterprises on-the-job training was relatively unstructured. The experience of employees at most of the case enterprises was that they learned their jobs through the activities of the supervisor, the leading hands or other employees. The case enterprises were also moving towards a greater use of off-the-job training for shop floor employees. The best examples of this were at Nissan, NEC and Siemens. At these enterprises, the introduction of industry-wide training programs such as the Vehicle Industry Certificate and the Engineering Production Certificate involved substantial time attending off-the-job training.

Training resources. Historically, the case enterprises had relied on internal resources for much of their training. Thus, most shop floor training was delivered on-the-job by co-workers and supervisors. The larger enterprises had more training resources at their disposal and so internalised many of the formal training programs that smaller enterprises sourced from external training providers. IBM and Siemens were the prime examples of this process of internalisation. IBM, in particular, had a centralised training division whose specialist trainers visited different sites to deliver off-the-job training programs. However, as the case enterprises were beginning to experiment with greater provision of off-the-job training for shop floor employees, they were also turning to the external vocational education and training (VET) system for support.

Content of training. The training in the case enterprises reflected the technical, engineering nature of the industries. Many of the larger enterprises such as Siemens, Nissan

and IBM offered extensive and well-planned training programs for engineers, particularly graduate engineers. The recruitment and training of non-technical, professional staff was not as well managed as the engineering training programs. The larger enterprises had similar programs for their commercial graduate trainees but this did not involve the extensive training and overseas placements that engineering recruits experienced. At the shop floor level, the emphasis in the case enterprises was traditionally on technical training to cope with changes in product or process technology. At IBM, shopfloor technical training was highly structured and accompanied by a signing-off procedure to certify that the employee was competent to perform certain tasks. However, this traditional focus on job related, technical training on the shop floor was beginning to give way to training aimed at enhancing the behavioural skills of employees. The adoption of quality improvement programs had led to new training initiatives for shop floor employees which emphasised attitudinal and behavioural skills. Managers in the case enterprises regarded training for quality as essential to the new philosophy of devolving responsibility for quality from specialist quality departments to the employees themselves.

Specificity of training. Although the traditional model of training in the case enterprises had focused on firm specific, on-the-job training, the specificity of this training should not be overemphasised. Often the on-the-job skills that shop floor employees learned through this form of training included a significant component of general training. This was particularly true within an industry in which employees could readily transfer their skills to other enterprises that worked with similar processes. Thus, the job-specific skills learned by shop floor employees at NEC or Siemens focused on activities such as component recognition, general circuit board assembly and fault finding; all quite transferable to other enterprises in the electronics industry.

The case enterprises in the study appeared to be in a period of transition in the provision of training. The extent of training was increasing. All of the enterprises were preparing to increase their expenditure on training and all were beginning to provide more training for their shop floor employees. The nature of shop floor training was also changing. Training was becoming more formal as the case enterprises planned the introduction of more comprehensive systems of shop floor training. Although training for shop floor employees was overwhelmingly on-the-job in nature, more off-the-job elements were being introduced, particularly with the introduction of industry-wide training programs. Training in behavioural

skills was increasingly important to support changes to work organisation, investments in technology and the introduction of quality improvement programs. These changes in the nature of training provision form the basis for Proposition 1.

Proposition 1. *Training in enterprises is characterised by a transition from a "traditional" model based on a high degree of informality, on-the-job delivery and a focus on technical, job-specific training to a "new model". The new model of enterprise training is based on a more formalised approach, use of a mix of on-the-job and off-the-job delivery, greater involvement of external training providers and a focus on the development of general, behavioural skills.*

ENTERPRISE TRAINING AND BUSINESS STRATEGY

Despite the recent growth of strategic HRM as a dynamic field of study (Boxall, 1996), little work has been undertaken that illuminates the connection between training and business strategy. Strategic models of HRM suggest possible links between training and business strategy. Matching model theories (Legge, 1995) such as those of Kochan and Barocci (1985) and, later, Schuler & Jackson (1987) suggest that training arrangements will be closely related to the position of the enterprise in its life cycle or the type of generic strategy which it has adopted. However, in practice, it is difficult to find conclusive evidence of a close fit between business strategy and HRM, not to mention training. The most significant work on the relationship of training and business strategy was undertaken by Pettigrew and his colleagues in their investigations into the strategic role of the HRM function in a range of British companies in the late 1980s. Pettigrew's work focused on training as a strong indicator of the presence of a strategic approach to HRM (Pettigrew, Sparrow & Hendry, 1989; Hendry, 1991). In Pettigrew & Hendry's model, the process of formulating business strategy leads to the identification of a skills gap which "triggers" training in the enterprise. However, the form of training arranged is determined by a range of internal factors rather than the business strategy. More recently, resource-based theories of strategic HRM (Wright & McMahan, 1992) have indicated that training plays a central role in the development of core competencies in the enterprise and may, in some circumstances, lead the development of business strategy as managers make decisions to build on the strengths of their human resources rather than vice versa (Cappelli & Crocker-Hefter, 1996).

In this study, all the case enterprises were facing an increasingly competitive environment at the time of the research, primarily as a result of deregulation of manufacturing industry involving a sharp reduction in tariff protection and a consequent increase in international competition. However, with the exception of IBM, few of the case enterprises had developed clear business strategies to deal with the new environment. Mintzberg (1994) has distinguished between three forms of business strategy—intended, deliberate and emergent. Intended strategies are concerned with plans and intentions; deliberate strategies are those intended strategies that have been realised and can be seen to be working and emergent strategies are patterns of actions that can be distinguished in the enterprise's behaviour over time but are not the result of a conscious plan. Mintzberg's typology may be used to understand the development of business strategies amongst the case enterprises.

The telecommunications enterprises (NEC and Siemens) were beginning to develop business strategies to cope with the deregulation of the telecommunications market. In the case of Siemens, the enterprise had decided to pursue a closer, long term relationship with Telecom Australia, in order to secure its position in the domestic Australian market. NEC had decided to diversify out of the Australian market by securing a niche in the globalisation plans of the parent enterprise in Japan by producing the P3 mobile phone for export. At Dorf, a new management team installed in 1990 had begun the process of generating an intended business strategy for the enterprise. IBM had a clear and deliberate business strategy based on a low cost, high quality production strategy in order to compete with Japanese producers in the Asian market. The Australian subsidiary of Trico had also pursued a deliberate, manufacturing-based strategy since the mid-1980s. This involved the reduction of the cost of production through the introduction of innovative changes to shop floor manufacturing practice.

Neither Nissan nor Hella had embarked on the process of formulating deliberate business strategies to address their respective situations, although the emergent pattern of actions in both enterprises was clear. Nissan, reacting to the decline in its Australian market share, was engaged in a price war with competitors to improve its short term financial position. Hella, on the other hand, continued to enjoy the comparative advantages of a monopoly market in Australia. Despite the changes to the automotive market implicit in the deregulation of the industry, Hella did not see the need to engage in a process of long term strategic planning.

By using the training expenditure figures in Table 1 it is possible to plot the case enterprises on a diagram comparing their training activity with their business strategy. Figure 1 shows an inverted U-shape relationship between training expenditure and types of business strategy. As intended strategies become deliberate, the importance of training appears to crystallise and training expenditure increases. Emergent strategies, however, focused on the short-term position of the enterprise, do not appear to have significant implications for training. The case of IBM stands out clearly. Here the enterprise has a clearly defined business strategy that is supported by an extensive program of internal training at all levels in the enterprise and which is directly related to its strategic objectives. Nissan and Hella, on the other hand, provide equally clear examples of enterprises where strategy is emergent rather than deliberate. Neither enterprise had traditionally provided much training for employees, particularly at the shop floor level. Nor did the enterprises have plans to increase their training for employees.

Siemens, NEC and Dorf were all experiencing a significant increase in competition and were gradually developing intended strategies in order to cope with the changed market conditions. Thus, expenditure on training was increasing and was envisaged to increase over the foreseeable future. Trico provides an interesting counter-example to the thrust of the observed relationship between training and business strategy in the case enterprises. Although Trico had been developing and implementing a deliberate business strategy for a number of years, training was not extensive. This was primarily a result of the small size of the enterprise and its lack of access to training resources. Nevertheless, plans to introduce the TRIP workplace reform program entailed a significant increase in the training activity in the enterprise in the near future.

[Insert Figure 1 here]

Proposition 2 summarises the possible relationship of training to business strategy:

Proposition 2. *Enterprises that have adopted a deliberate strategy are more likely to provide training for shop floor employees than those in which strategy is an emergent phenomenon.*

TECHNOLOGY, TRAINING AND WORK ORGANISATION

Since Braverman's (1974) thesis of the degradation of work, the question of the impact of changes in technology and work organisation on skills and training has continued to pre-occupy scholars. The notion of the degradation of work has been challenged by post-Fordist writers (Piore & Sable, 1984; Mathews, 1990) who have claimed that new technology and team-based forms of work organisation lead to an increasing demand for skill and, thereby, an increase in training in enterprises. The available survey evidence suggests that changes to technology and work organisation produce a polarisation of skills with both deskilling and upskilling occurring (Adler, 1992; Gallie & White, 1993; Cappelli, 1993). Modelling the relationship in the late 1980s, the work of the OECD/CERI showed that training, technology and work organisation were systematically linked and that changes in one could not be fully realised by enterprises without changes to the other aspects of the system (Ford, 1989). More recently, research in the USA has confirmed the skills polarisation thesis and shown that it is the adoption of new forms of work organisation that require new skills which drive increases in training provision in enterprises (Cappelli & Rogovsky, 1994; Osterman, 1995; MacDuffie & Kochan, 1995). In particular, these studies have shown that it is non-technical, behavioural skills that seem to be required by changes to work organisation and technology.

In the case enterprises, production processes were, in large part, based on assembly. The degree of technology involved in the production processes in the case enterprises reflects the generally low level of penetration of advanced manufacturing technology into Australian enterprises (Department of Industry, Science & Technology, 1996). Automation had not been widely adopted in any of the case enterprises. However, significant differences did exist between the enterprises in the extent of automation that had been introduced. IBM had invested in the highest level of automation. This was the result of the enterprise's decision to manufacture their own printed circuit boards (PCBs) and use the excess capacity to sell PCBs to other manufacturers. NEC and Siemens did not produce their own PCBs but bought them from other suppliers. Automation was limited to the insertion of smaller components and final soldering. The level of automation in the other case enterprises was very limited. Figure 2 shows the relationship between the level of automation in the case enterprises and the expenditure on training. Data on the percentage of the production process that had been automated in the case enterprises was beyond the scope of this research. Thus, the categorisation of high, medium and low is based on a subjective judgement of the relative level of automation of production processes between the seven case enterprises. The

relationship between automation and expenditure on training appears to be linear with the more automated enterprises spending proportionately more on training.

[Insert Figure 2 here]

These results seem to contradict the findings of MacDuffie & Kochan (1995) that the level of automation is not related to the level of training in enterprises. They also suggest that higher levels of technology require higher levels of skill—at least amongst those employees working with the new technology. Thus, although the overall requirement for training may rise with the introduction of new technology, it appears that the effect is differentiated within the workforce—only those employees with direct access to the technology require an upgrading of their skills. This supports the thesis that the impact of technology has been to produce a polarisation of skill (Gallie & White, 1993) and leads to Proposition 3.

Proposition 3. *The higher the degree of automation in the enterprise, the greater the level of training which will be provided to shop floor employees. Training for technology is likely to be technical in content and resourced externally through equipment vendors.*

In all of the case enterprises, work organisation was very traditional in design. The dominant form of work organisation was the production assembly line. Although there was evidence of an increasing level of automation of the production process, such as the introduction of wave soldering machines in the telecommunications enterprises and some computer numerical control (CNC) machines in the automotive enterprises, the general shop floor environment could be characterised as low skill, low technology and traditional in work organisation.

Many of the case enterprises were examining the possibility of a change in work organisation. Generally, the direction of change or intended change was towards more team-based structures on the shop floor. However, despite the intentions of managers in the case enterprises in this respect, the degree of commitment to change and the level of implementation of change varied considerably. Hella had made significant changes to work organisation. The enterprise had introduced team-based assembly work in the late 1980s, mainly as a response to the rising incidence of Repetitive Strain Injury (RSI). Trico, whilst it

had not yet introduced teamwork, had been constantly innovating with new forms of work organisation since the mid-1980s. The enterprise also planned to re-organise the workplace using socio-technical systems methods in the near future. By comparison with Hella & Trico, the other case enterprises were moving very slowly, if at all, towards new forms of work organisation. Nissan had established a formal workplace change program but this had yet to be implemented and the level of management commitment to the program was suspect. Moreover, the driving force behind the introduction of teams at Nissan was the need to cover for absent workers. NEC managers also professed a desire to move towards more autonomy for shop floor employees but there was no consensus on how this could be brought about. Neither IBM, Siemens nor Dorf had any plans for the introduction of significant changes to work organisation in the foreseeable future.

The relationship between changes to work organisation and training is not straightforward. Essentially, the enterprises occupied one of three positions in regard to changes in work organisation.

1. increasing employee decision-making.
2. increasing control of employees.
3. no change.

Table 2 summarises the state of changes to work organisation at the case enterprise and their implications for training.

[Insert Table 1 here]

The findings from the case enterprises confirm the work of Cappelli (1993, 1994), Osterman (1994, 1995) and MacDuffie & Kochan (1995), that changes to work organisation have a significant impact on the level and type of training provided by enterprises. Specifically, those enterprises moving towards the adoption of high performance work practices such as teamwork, job rotation and TQM will provide training to support these moves. This is particularly true of enterprises where changes to work organisation are designed to increase employee autonomy. In these cases, enterprises will seek to develop the behavioural skills of their workforces to enable decision-making to be devolved. This supports the conclusions of

Cappelli (1993) and Osterman (1995) that behavioural skills have become an increasingly important focus for enterprise training. Proposition 4 states the hypothesised relationship of training and work organisation:

Proposition 4. *Enterprises introducing changes to work organisation with the intention of increasing employee autonomy will train their employees in behavioural skills. Enterprises introducing work organisation changes to increase employee control will train their employees in technical skills.*

TRAINING AND INDUSTRIAL RELATIONS

The influence of industrial relations on training has been related both to the external industrial relations system (process for wage determination, arbitration etc) and the internal industrial relations climate in the enterprise. Developments in Australia's industrial relations system in recent years have seen a move away from the centralised, award-driven system established in 1904 towards a decentralised system of collective bargaining with a shrinking role for the Industrial Relations Commission in arbitration and conciliation. From the point of view of training, two key processes have been award restructuring and enterprise bargaining. Commencing in 1988, award restructuring, championed by the former Labor federal government and the Australian Council of Trade Unions was an attempt to overhaul Australia's out-of-date industrial awards which govern employee terms and conditions. Training was given a central position in the new, restructured awards as it was linked to new job classifications and provided many blue-collar employees with a career path linking pay and skills for the first time (Teicher & Grauze, 1996). Since 1991, the role of the Industrial Relations Commission has been gradually reduced as enterprises and unions have pursued enterprise bargaining to negotiate collective agreements that replace industrial awards. Analysis of the enterprise agreements negotiated since 1991 shows that clauses relating to training provision have been an important feature of most agreements (Department of Industrial Relations, 1993) but the incidence of training clauses has fallen in more recent rounds of enterprise bargaining (Guthrie & Barnett, 1996).

With the exception of the non-unionised IBM, all the case enterprises had been affected by the award restructuring process although few managers felt that their enterprises had gained much by the exercise. In general, the enterprises were only beginning to deal with the

implications of implementing new job classification structures. Award restructuring had, however, introduced a greater degree of consultation into the case enterprises. In most cases, the award restructuring process had been organised through joint union-management committees. Although slow to implement award restructuring, the real impact of these consultative processes was to improve the level of trust between union delegates and managers in the enterprises. Thus, these committees paved the way for a greater level of workplace negotiation brought about by the introduction of enterprise bargaining. At the time of the research, the case enterprises were only beginning to come to grips with the consequences of enterprise bargaining. Consultative arrangements were being put in place, although the substance of the enterprise bargaining negotiations was focused on relatively minor issues such as changes to rostered days off or reductions in tea-breaks, etc.

The OECD/CERI studies in the mid-1980s (OECD/CERI, 1986, 1988) showed that the internal industrial relations climate within an enterprise was linked to the level of training provision. In simple terms, training could only be successfully implemented if the enterprise adopted a participative industrial relations style which enhanced the level of trust between employers and employees. More recently writers in the post-Fordist tradition have argued that the introduction of more participative forms of work organisation require a higher level of commitment from employees and the abandonment of traditional adversarial styles of industrial relations (Curtain & Mathews, 1990; Mathews, 1993). Training is important in this context as it provides a area of common ground between employers and unions in which consensus can be reached. However, the consensual nature of training may be illusory as enterprises often have to be persuaded to invest in training (Stuart, 1996). In other cases managers may use training as a means of manipulating employees into surrendering their tacit knowledge and skills (Heyes, 1996).

The industrial relations climate in the case enterprises was remarkably quiescent. With the possible exception of Dorf, where an industrial dispute had taken place in the late 1980s over plans for the relocation of the plant, none of the case enterprises reported any significant industrial unrest. Although the level of overt disputation in the case enterprises was low, the degree of co-operation between management and unions in the case enterprises varied significantly. Nissan and, to a lesser extent, Hella, typified the traditional, adversarial relationship between unions and management. At Hella, an orthodox, constitutional approach to industrial relations prevailed. There was little disputation but also little co-operation.

Management at NEC and Siemens had traditionally sought to minimize the scope for industrial disputes by working with the unions informally to achieve consensus before embarking on any change processes. Dorf, since its dispute over the move of enterprise premises, had made significant efforts to involve the unions through extensive consultation. Managers at Trico had always worked closely with unions. The considerable changes which the enterprise had introduced in the recent past had been implemented with the full involvement of unions and workforce. IBM Australia was non-unionised, so questions of union co-operation did not arise.

Marchington & Parker (1990) have developed two dimensions for employee relations style. The two dimensions measure management's approach to employees and to unions separately. The employee dimension measures the degree to which management invests in employee skills and development. The union dimension measures extent to which management works in partnership with unions. Figure 3 maps all the case enterprises onto Marchington & Parker's dimensions.

[Insert Figure 3 here]

IBM is clearly an outlier in this Figure, having no partnership with unions. However, the other case enterprises are scattered along both axes. Nissan and Hella have both a low investment and partnership orientation. Using training as the measure, both enterprises had a low investment orientation to their employees and neither had developed co-operative arrangements with their unions. NEC and Siemens displayed a higher investment orientation towards their employees. These enterprises had also pursued a traditional policy of co-operation with the unions and were now in the process of institutionalising this co-operation through more formalised consultative arrangements. Of all the case enterprises, Trico and Dorf had established the most co-operative and, in the case of Dorf, the most consultative relationships with unions. At the same time, these enterprises were less oriented to the development of employees and spent less on training.

This suggests an inverted U-shaped relationship between the degree of partnership with unions and the extent of the investment orientation in employees. In enterprises with either a

high or a low partnership orientation, management attention is focused on their relationship with the unions. In the case of Nissan and Hella a low partnership orientation arises from a difficult and essentially, untrusting, relationship. In this situation management is concerned with obviating the problems that arise from a poor union-management relationship. In enterprises with a high partnership orientation, management attention is focused on building a much closer, co-operative relationship with the unions. In enterprises such as Trico managers are concerned with building and nurturing the positive relationship to facilitate the development of the enterprise in the future. However, in both low and high partnership enterprises, investment in training appears to be lower than in those enterprises such as NEC and Siemens lying in the middle of the partnership dimension. Relationships between management and union in these enterprises are good without being too close and, to some extent, may be taken for granted. Both enterprises also appear to invest more in the training of their employees.

The evidence from the case enterprises suggests that at either end of the partnership dimension the focus for management is on the relationship with the union rather than the individual. As a result, in relatively poor or, alternatively, very close relationships between management and unions, investment in the skills and development of the individual is lowered. In enterprises that occupy the middle ground on the partnership dimension, managers can focus on the need of individuals more clearly and invest more in the training and development of individual employees. This is summarised in Proposition 5:

Proposition 5. *Shop floor employees are more likely to receive training in an industrial relations climate in which managers are not pre-occupied with formal relationships between management and unions.*

MANAGERIAL ATTITUDES TOWARDS TRAINING

It has become something of a truism in the training literature that management "commitment" is required before training can be implemented effectively in organisations (Hendry, 1991; Field & Ford, 1995). However, as Finegold and others have shown, the nature of the financial markets in the English speaking world has produced a culture in which short term financial results are very important to managers at all levels in enterprises (Finegold, 1991; Karpin, 1995). This often determines the daily procedures within which managers have to

operate; for example, capital budgeting, in which the enterprise will judge the merits of a proposal to invest on the basis of very short pay-back periods, often in the realm of months rather than years.

The overwhelming attitude amongst managers in the case enterprises towards training was one of looking for immediate gains from short, sharp training programs aimed at meeting specific and measurable training needs. Nevertheless, there were substantial differences between the case enterprises in terms of the degree of management commitment to training. IBM and Trico represent the enterprises with the highest level of management commitment to training. At IBM, managers were quite aware that the structured shop floor training which all employees received was critical to the performance of the enterprise in overseas markets. Despite the onerous time commitments involved, managers at IBM were committed to ensuring that training was carried out properly for all employees. At Trico, management had realised the need for much more extensive shop floor training to support workplace reform, although the training had yet to be implemented. NEC, Siemens and Dorf represent a lower but emerging commitment to training. Training for quality was viewed as important at all these enterprises but these enterprises were also experimenting with more general forms of training for their shop floor employees. Dorf was committed to running English language courses for its migrant workforce. Both of these forms of training were longer-term in nature and promised benefits only in the future. Nissan and Hella represent enterprises where managers were openly sceptical about the value of training.

However, the level of management commitment to training varied *within* enterprises as much as *between* enterprises. In all of the case enterprises there was a noticeable difference between the rhetoric about training employed by senior managers and that of managers further down the hierarchy. Senior managers tended to display a high commitment to the importance of training and the importance to the enterprise of creating a more highly skilled workforce. Middle and junior managers, on the other hand, were usually more sceptical. For them training had to have immediate tangible results. This bears out Finegold's (1991) views that the short term orientation of managers in English speaking countries will impact on their attitudes to training. Although the attitudes of senior managers tend to be broader and more future-oriented, middle and junior managers are traditionally measured on their ability to meet very short term targets such as output, quality and productivity. It is at this level that the problems posed by releasing employees for training are most acutely felt and managers want

some tangible result for the difficulties posed by implementing extensive training programs for employees. Analyses of enterprise training which do not pay attention to the fissures and fractures in management attitudes to training risk grossly oversimplifying the critical role of managers in the implementation of training programs. Proposition 6 states the hypothesised relationship between training and managerial attitudes:

Proposition 6. *Senior managers with a long-term perspective will be more committed to training employees than junior or middle level managers who operate with shorter time horizons.*

TRAINING AND ENTERPRISE PERFORMANCE

Orthodox human capital theory explains the link between training and performance as a function of the individual. Training will raise the productivity of the individual and, as a result, the productivity of the enterprise. The trained individual will partake in the benefits accruing to the enterprise from increased productivity in the form of higher wages (Mincer, 1962, 1974; Becker, 1964). However, the empirical evidence supporting the link between training and higher wages as a result of higher productivity is contradictory and does not lend unequivocal support to the notion that more training results in higher wage outcomes (Lynch, 1991; 1992; Bishop, 1994; Veum, 1995). The direct link between training and enterprise performance has been examined both by economists (Bartel, 1994; Bishop, 1994) and by industrial-organisational psychologists (Burke & Day, 1986). However, as Bishop notes of the industrial-organisational psychology studies (1994b: 19):

> While cumulative reviews of the training literature provide suggestive evidence about which training methods are more effective, the generalisations that can confidently be drawn from this literature are few. Any one issue is addressed by only a few studies, sample sizes are small ... criterions are often of doubtful relevance to establishment profitability and designs are often flawed.

Enterprise performance data collected in this study included the level of exports from the enterprise and the share of the domestic Australian market it enjoyed. In terms of export activity, IBM with 70 per cent of production destined for export and Trico with 25 per cent were the only major exporters amongst the case enterprises. NEC and Dorf exported a small amount of production although this activity was growing in both enterprises, particularly at Dorf. Siemens, Nissan and Hella did not support any significant export activity.

Australian domestic market share also varied considerably between the case enterprises. Both Trico and Hella enjoyed near monopoly conditions in the Australian market. Despite setbacks in the 1980s, Dorf still commanded a dominant share of the Australian market. NEC, Siemens and IBM, however, had a number of competitors in the Australian market and generally enjoyed market shares of around 10-15 per cent depending on the equipment sector examined. These three enterprises can be viewed as mid-ranking players in their respective markets at the time of research. Nissan was consistently the lowest performer amongst the five Australian car producers during the early 1990s and showed little sign of improving that position significantly in the near future.

Figure 4 illustrates the relationship between training expenditure and domestic market share for the case enterprises. The categorisations of low, medium and high are based on the relative standing of the enterprise in its market. The categorisation of “low” indicates that the enterprise occupies a poor position in the market. The categorisation of “medium” indicates that the enterprise occupies a significant but not dominant position in the market The categorisation of “high” indicates that the enterprise enjoys a dominant position in the market. The enterprises seem to fall into three groups. Trico, Hella and, to a lesser extent, Dorf all enjoy domestic market dominance. They were all relatively low investors in training. Siemens, IBM and NEC were all competing in a highly competitive market. None enjoyed a dominant position in the domestic market but all were successfully competing. These enterprises were also the higher investors in training. Nissan was struggling in a very competitive market and was a low investor in training. The inverted U-shape relationship suggested by the Figure, implies that training may be less important to enterprises that dominate markets or are not successfully competing. Enterprises that are successfully competing in a turbulent market may be more inclined to view training as important to their future survival in that market and will tend to invest more in employee development.

Figure 5 shows a slightly more linear relationship between levels of exports and training expenditure. In this figure, the categorisations of low, medium and high are based on the significance of the export activity for the enterprise. The categorisation of “low” indicates that exporting is not an important activity for the enterprise. The categorisation of “medium” indicates that export activity may be limited but is of growing significance to the enterprise. The categorisation of “high” indicates that exports represent a significant share of production for the enterprise.

IBM and Trico were the higher exporting enterprises and also higher investors in training. Nissan and Hella had no real export program and were amongst the lower investors in training. NEC and Dorf were increasing their level of exports and their expenditure on training. This suggests that an increasing focus on exports tends to produce a corresponding increase in training expenditure as the greater competitive rigour demanded by export markets compels the enterprise to develop the skills necessary to become more competitive. Siemens is an outlier in this figure representing an enterprise that had no export program but was a high training spender. This may reflect the strategy of the enterprise to secure its place in the increasingly deregulated domestic market through a partnership with Telecom Australia and to develop the skills to become the supplier of choice to Telecom in the future.

[Insert Figure 4 here]

[Insert Figure 5 here]

Thus, the relationship of training to performance seems to be mediated by the level of competition. As enterprises emerge from protected, domestic market environments into fully competitive markets, either domestic or international, training expenditure appears to rise in those enterprises that successfully meet the higher performance standards required by the increasing competition. Higher investment in training seems to be linked to success in competitive markets. This can be summarised in Proposition 7.

Proposition 7. *Enterprises enjoying success in a competitive business environment are more likely to train their shop-floor employees than either enterprises failing in a competitive environment or enterprises in a dominant position in their markets.*

CONCLUSION

The debate over the role of training at the enterprise level has been informed by analysis of survey data which often yields a very coarse view of the operation of training in enterprises. As a result, little theory has been developed which helps to explain the role and operation of training within enterprises. Explanations of enterprise training rely on insights generated from other disciplinary fields. Thus, human capital theory sheds light on the motives of enterprises in providing training, distinguishing general from specific training and addressing the question of how resources are allocated to these different forms of training. Similarly, theories of work organisation have shed light on the role of training in the successful implementation of new forms of work organisation in enterprises. However, none of these theories offer explanations for the operation of training at the enterprise level in its own right (Cappelli, 1994). Recently, however, qualitative studies of the type of training that takes place at the enterprise level and the factors that affect it have begun to illuminate this area and begin the process of theory-building (Smith & Hayton, in press).

This paper has drawn on qualitative studies of seven manufacturing enterprises in Australia to elaborate a possible research agenda for enterprise training. The seven propositions advanced in this paper summarize the key elements of a research agenda. First, what is the nature of training at the enterprise level and how is it changing. The research reported in this paper confirms that Australian enterprises are still using a traditional model of training based on informal, on-the-job methods (Collins & Hackman, 1991). However, changes in the use of technology and, more importantly, work organisation are leading to a revaluation of the role of training in the facilitation of organisational change (Heyes, 1996) resulting in the emergence of a new model of enterprise training. This new model lays more emphasis on a formal approach to training and incorporates both on and off-the-job methods. In some cases, this may also lead to the devolution of responsibility for training to line managers and the delivery of training in a workplace setting–the so-called learning organisation (Raper, Ashton, Felstead & Storey, 1997). However, this study suggests that the extent of the transformation of enterprise training is dependent on the extent of organisational change and, in particular, to the degree of autonomy afforded to employees in the new forms of work organisation.

Second, the competitive position of the enterprise is very important in determining the extent and nature of enterprise training. Pettigrew and his colleagues established the importance of

the link between business strategy and enterprise training. In their model, the process of formulating business strategy triggers enterprise training through the identification of skills gaps in the strategy (Pettigrew, Sparrow & Hendry, 1989). However, the type and extent of training appears to be related to nature of the business strategy formulation process and the competitive position of the enterprise in its market. It is enterprises that have adopted a deliberate business strategy in order to secure their position in a highly competitive market that are more likely to make substantial investments in training as they attempt to capitalise on the skills of their human resources to build sustainable competitive advantage. The evidence from these case studies, therefore, confirms the importance of resource-based views of the firm to the development of the theory of enterprise training (Kamoche, 1996). Processes of skill formation at the enterprise level are directly linked to the attempts by managers to capture what Boxall (1996) refers to as "human process advantage" in competitive markets.

Third, the role of the individual is critical to the understanding of training at the enterprise level. In enterprises where the nature of industrial relations obscures the importance of the individual in favour of the collective employment relationship, the role of training appears to be diminished. It is the realisation in the enterprise of the importance of the skills and development of individual employees that appears to drive investments in training. A focus on the role of the individual has the potential to develop resource-based views of human resource management in which the analysis tends to emphasise the development of the overall skill level of the workforce or the skills of groups of employees (Mueller, 1996).

Finally, this research has shown that management attitudes to training are not monolithic. It has been a truism quoted in the training literature that management commitment is a necessary pre-requisite of effective training. However, this approach ignores the fissures that often develop between groups of managers over many issues in enterprises and have been well documented in the organisational behaviour literature. Training is no exception to this pattern of managerial disunity. Whilst some groups of managers, particularly those in senior or more strategic positions in the enterprise, might recognise the importance of developing skills for sustainable competitive advantage, other groups might harbour more short-term priorities. This may reflect the differential impact of performance management systems that reward the achievement of short-term goals by middle and junior managers rather than activities which build the long-term competitive position of the enterprise.

This paper has reported the results of a qualitative study of training in a group of manufacturing enterprises in Australia. Qualitative evidence has been lacking in the debate on training that has taken place in developed countries in recent years. This has retarded the development of adequate theories to explain the role and operation of training at the enterprise level. This paper has suggested a number of propositions that reflect key issues in research into training. They represent an initial agenda to guide further research and the eventual development of a theory of enterprise training.

Notes

[1] The Training Guarantee Scheme was introduced by the Australian Labor government in 1990 in order to stimulate the provision of enterprise training. The Training Guarantee involved a requirement on all enterprises employing more than 200 people to spend at least 1.5 per cent of their payroll costs on employment related structured training for employees every year. Failure to comply resulted in a levy for the same amount on the enterprise. The Training Guarantee was suspended in 1994 and later abolished by the incoming federal conservative Coalition government in 1996.

REFERENCES

Adler, P. (Ed) 1992. *Technology and the future of work.* New York: Oxford University Press.

Allen Consulting Group, 1994. *Successful reform: Competitive skills for Australians and Australian enterprises,* Report to the Australian National Training Authority. Melbourne: Allen Consulting Group.

Ashton, D. & Felstead, A. 1995. Training and development. In J. Storey (Ed), *Human resource management: A critical text.* London: Routledge.

Australian Bureau of Statistics, 1994. *Employer training expenditure Australia: July to September 1993.* Canberra: AGPS.

Becker, G.S. 1964. *Human capital: A theoretical analysis with special reference to education.* New York: Columbia University Press.

Bishop, J.H. 1994. *The incidence and payoff to employer training.* Center for Advanced Human Resource Studies. Working Paper 94–17, Cornell University.

Boxall, P.F. 1996. The strategic HRM debate and the resource-based view of the firm. *Human Resource Management Journal,* 6 (3): 59–75.

Braverman, H. 1974. *Labor and monopoly capitalism: The degradation of work in the twentieth century.* New York: Review Press.

Burke, M.J. & Day, R.R. 1986. A cumulative study of the effectiveness of managerial training. *Journal of Applied Psychology,* 71: 232–245.

Cappelli, P. 1993. Are skill requirements rising?: Evidence from production and clerical jobs. *Industrial and Labor Relations Review,* 46 (3): 515–30.

Cappelli, P. 1994. *Training and development in public and private policy*. Dartmouth: International Library of Management, USA.

Cappelli, P. & Crocker-Hefter, A. 1996. Distinctive human resources are firms' core competencies. *Organizational Dynamics,* 243(3): 7–22.

Cappelli, P. & Rogovsky, N. 1994. New work systems and skill requirements. *International Labour Review,* 133 (2): 205–220.

Collins, R. & Hackman, K. 1991. *National survey of training and development practices, July 1991*. Sydney: CCH-AGSM.

Commission on the Skills of the American Workforce, 1990. *America's choice: High skills or low wages!* New York: The National Center on Education and the Economy.

Coopers & Lybrand, 1985. *A challenge to complacency: changing attitudes to training.* London: Manpower Services Commission.

Curtain, R. & Mathews, J. 1990. Two models of award restructuring. *Labour and Industry,* 3 (1): 58–75.

Department of Industrial Relations, 1993. *Enterprise Bargaining: The first one thousand agreements.* Canberra: AGPS.

Department of Industry, Science & Technology, 1996. *Australian business innovation: A strategic analysis.* Canberra: AGPS.

Dyer, L. ,1984. Studying human resource strategy: An approach and an agenda. *Industrial Relations,* 23 (2): 156–169.

Field, L. with Ford, G.W. 1995. *Managing organisational learning: From rhetoric to reality.* Melbourne: Longman Cheshire.

Finegold, D. 1991. Institutional Incentives and Skill Creation: Preconditions for a High Skills Equilibrium. In P. Ryan (Ed). *International comparisons of vocational education and training for intermediate skills.* London: Falmer Press.

Ford, G.W. 1989. Conceptual Changes and Innovations in Skill Formation at the Enterprise Level in OECD/CERI. *Technological change and human resources development: The service sector.* Netherlands: OECD.

Gallie, D. & White, M. 1993. *Employee commitment and the skills revolution*. London: PSI Publishing.

Guthrie, H. & Barnett, K. 1996. *Training and enterprise bargaining: Enterprise-based approaches to training.* Adelaide: National Centre for Vocational Education Research.

Hendry, C. 1991. Training and Corporate Strategy. In J. Stevens & R.Mackay (Eds), *Training and competitiveness.* London: Kogan Page.

Heyes, J.A , 1996. Formula for success? Training, reward and commitment in a chemicals plant. *British Journal of Industrial Relations,* 34 (3): 351–369.

Heyes, J.A. & Stuart, M. 1996. Does training matter? Employee experiences and attitudes. *Human Resource Management Journal,* 6 (3): 7–21.

Kamoche, K. 1996. Strategic human resource management within a resource-capability view of the firm. *Journal of Management Studies,* 33 (2): 213–33.

Karpin, D.S. 1995. *Enterprising nation: Renewing Australia's managers to meet the challenges of the Asia-Pacific century.* Report of the Industry Taskforce on Leadership and Management Skills. Canberra: AGPS.

Kochan, T.A. & Barocci, T. 1985. *Human resource management and industrial relations: text, Readings and cases*. Boston: Little Brown.

Legge, K. 1995. *Human Resource Management: Rhetorics and Realities*. Macmillan, London.

Lynch, L. M. 1991. The role of off-the-job vs. on-the-job training for the mobility of women workers. *American Economic Review,* 81 (2): 151–56.

Lynch, L. M. 1992b. Private-sector training and the earnings of young workers. *American Economic Review,* 82:1, 299–312.

MacDuffie, J.P. & Kochan, T.A. 1995. Do US firms invest less in human resources? Training in the world auto industry. *Industrial Relations,* 34 (2): 147–168.

Marchington, M. & Parker, P. 1990. *Changing patterns of employee relations*. Harvester Wheatsheaf, London.

Mathews, J. 1993. The industrial relations of skill formation. *International Journal of Human Resource Management,* 4 (3): 591–609.

Miles, B.M. & Huberman, A.M. 1994. *Qualitative data analysis: An expanded sourcebook* (2nd ed). Thousand Oaks: Sage.

Mincer, J. 1962. On-the-job training: costs, returns and implications. *Journal of Political Economy,* LXX: 50–79.

Mincer, J. 1974. *Schooling, experience and earnings.* New York: Columbia University Press.

Mintzberg, H. 1994. *The rise and fall of strategic planning.* Hemel Hempstead: Prentice Hall International.

Mueller, F. 1996. Human resources as strategic assets: An evolutionary resource-based theory. *Journal of Management Studies,* 33 (6): 757–785.

OECD/CERI, 1986. *New technology and human resource development in the automobile industry.* Paris: OECD (mimeographed).

OECD/CERI, 1988. *Human resources and corporate strategy: Technological change in banks and insurance companies.* OECD, Paris.

Osterman, P. 1994. How common is workplace transformation and who adopts it? *Industrial and Labor Relations Review,* 47 (2): 173–88.

Osterman, P. 1995. Skill, training, and work organization in American establishments *Industrial Relations,* 34 (2): 125–146.

Piore, M. & Sabel, C. 1984. *The second industrial divide.* New York: Basic Books.

Pettigrew, A. Sparrow, P. & Hendry, C. 1989. The forces that trigger training. *Personnel Management,* December, 28–32.

Raper, P. Ashton, D. Felstead, A. & Storey, J. 1997. Toward the learning organisation? Explaining current trends in training practice in the UK. *International Journal of Training and Development,* 1 (1): 9–21.

Schuler, R.S. & Jackson, S.E. 1987. Linking competitive strategies with human resource management practices. *Academy of Management Executive,* 1, 206–219.

Smith, A. & Hayton, G. (forthcoming). What drives enterprise training? Some evidence from Australia. *International Journal of Human Resource Management.*

Stuart, M. 1996. The industrial relations of training: A reconsideration of training arrangements. *Industrial Relations Journal,* 27 (3): 253–265.

Teicher, J. & Grauze, A. 1996. Enterprise bargaining, industrial relations and training reforms in Australia. *Australian Bulletin of Labour,* 22 (1): 59–80

Wright, P.M. & McMahan, G.C. 1992. Theoretical perspectives for strategic human resource management. *Journal of Management,* 18 (2): 295–320.

Veum, J.R.1995. Sources of training and their impact on wages. *Industrial and Labor Relations Review,* 48 (4): 812–26.