The impact of a learning culture on organisational change in regional SMEs

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Abstract: This paper explores the impact of a learning culture on organisational change in small to medium-sized regional manufacturing enterprises following a review of the related literature, and a qualitative study of 10 manufacturing SMEs in the Riverina region of New South Wales. The research confirmed that key learning culture factors as identified in the literature were significant in the regional manufacturing firms studied. These included a strong commitment to a learning culture within the organisation, employee involvement in the development of the learning culture, demonstrating the tangible benefits of a learning culture to senior managers, and strong leadership support for organisational learning.

Keywords: learning culture; organisational change; commitment to learning; employee involvement; regional SMEs.


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and development resulting from the creation and adoption of new technologies, the development of domestic and export markets, and factors influencing the clustering of regional SMEs in particular regional locations.

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1 Introduction

Organisations operate in a constantly changing global environment, and this poses a challenge for them to adapt in order to maintain their vitality and sustainability. To achieve this, organisations depend on learning to generate the momentum for future organisational change initiatives, learning having become a source of global competitive advantage since the 1990s (Barnett and McKendrick, 2004; Pettigrew et al., 2001). The research being undertaken in this area is therefore important in that it may provide further evidence on the nature of organisational culture and its contribution to organisational change. This is expected to assist in generating new insights that will facilitate best practice in developing a learning culture to support change initiatives. This in turn will assist organisations in improving their sustainability and competitiveness in domestic and international markets.

While writers have either explicitly or implicitly noted the link between organisational culture and change, there has been limited writing based on empirical research in the area, resulting in a gap in evidence-based theory to support best practice (Easterby-Smith and Lyles, 2011; Corradi et al., 2010). In addition, there has been limited research into these issues at a sub-national regional level, particularly in small to medium-sized enterprises (SMEs). The research undertaken for this study aims to bridge these gaps and to explore the influence of a learning culture in supporting organisational change in SMEs in a rural region of Australia.

Links have been identified between a learning culture and organisational change through the role of the former in stimulating innovation (Reissner, 2005). Some writers, such as Chinowsky and Carrillo (2007, p.124), have recognised the connection, drawing attention to the link in their definition of a learning organisation as being “skilled at creating, acquiring, sharing, and applying knowledge, and embracing change and innovation at all levels, resulting in optimum performance and maximum competitive advantage”.

Other writers such as Higgins and McAllaster (2004), take the broader view that if organisations wish to achieve change, they need to begin by making changes to their organisational culture in general, of which the learning culture is a part.

Kontoghiorghes et al. (2005) focus on change, adaptation and innovation in their study of the relationship between a learning culture and organisational change, while Lyle (2012, p.217) makes the link to change by referring to the influence of a learning culture on organisational capacity as one that allows the organisation “to adapt to its
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external environment”. Huy (1999) also draws attention to the role of learning in organisational change, arguing that change comprises the three dynamics of receptivity, mobilisation and learning.

The geographical setting for the research reported in this paper is the Riverina Region of New South Wales. The region, as delineated by the Australian Bureau of Statistics and the New South Wales Government, is located in South-Western New South Wales, extending along the Murrumbidgee River from the Snowy Mountains in the East, to near its junction with the Murray River in the West. It has a total area of over 63,000 square kilometres, approximately 120 kilometres North to South and approximately 500 kms East to West. The region has a total population of just over 150,000, Wagga Wagga being the largest urban centre with a population of approximately 72,000, and Griffith the second largest urban centre with a population of approximately 28,000.

The region has a small but significant manufacturing sector, processing agricultural commodities grown mainly within the region, and producing capital goods for that sector (Bamberry, 2010). It also has a small number of manufacturing firms whose location in the region can be explained as “accidents of history” in that the entrepreneurs who established the businesses just happened to be working and living in the region. Another small group of firms, originally from outside the region, were attracted to the region because of locational advantages, together with financial support from state and local government. The latter firms generally have a national or international background, while the former groups are mainly owned and operated as family, individual and partnership businesses. Very few of the firms undertake formal research and development activities, though many are aware of the value of learning, and could be described as having developed a learning culture.

This paper begins by reviewing the literature on learning culture and change, and identifies four potential factors that explain how the development of a learning culture within an organisation can bring about organisational change. It then describes the qualitative research approach used in the study of a sample of SMEs in the Riverina Region to investigate the impact of a learning culture on organisational change, and to explore the findings emerging from the research.

2 Literature review

2.1 Learning culture and organisational change

In recent years, there has been an increasing recognition that organisational change is essential in ensuring the long-term sustainability of an organisation (Anderson and Anderson, 2001). The highly competitive environment in which firms operate has become more unpredictable and risky (Barnett and McKendrick, 2004). Consequently, the creation of a culture that supports the organisation’s capacity to analyse and digest the flow of information, and to implement change promptly, is paramount to its sustainability and survival.

There are numerous textbooks providing frameworks to guide organisational change, for instance, the texts of Burns (2009), Waddell et al. (2011), Carnall (2010) and French et al. (2005). While these texts describe and provide advice on steps on implementing programs of organisational change, they generally do not include the development of a learning culture in these steps.
Corley and Gioia (2004) argue that change entails a cyclical transition from clarity to ambiguity, eventually returning to a new state of clarity, implying a significant role for learning in the process of change. Casey (2005) draws attention to the cyclical nature of learning, arguing that learning leads to change through a four-stage process involving adaption, goal attainment, integration and pattern maintenance. Murray’s (2002) work also has a cyclical focus, though he draws attention to change occurring through a series of cycles in which improvements made in one cycle provide a basis for further change in the next cycle.

Sorensen (2002) has observed that organisational change occurs incrementally or radically. Palmer et al. (2009), refer to incremental and transformational change as first order and second order change, but also use the former terms. Incremental change is described as an intervention characterised by participative management and collaborative forms of work, and that requires basic operational change and work redesign. It includes changes to the way people work, changes to the units and processes of the business, and changes to reward systems, information systems and technologies. These changes are planned, emergent, continuous and ongoing (Benn and Dunphy, 2007). Incremental change does not normally involve changes in organisational structure in the short term, though a series of incremental changes over time could lead to a radical departure from the original situation.

On the other hand, transformational change is described as a process where an organisation undergoes a radical re-invention, taking the opportunity to recreate itself according to some future ideal. It is argued that to do this successfully, an organisation needs outside assistance to develop a vision for the future, and that leadership plays a major role in transformative change (Benn and Dunphy, 2007). For most organisations, the nature of the change undertaken is incremental, and it is this type of change that is the focus of the research in this study. In addition, some writers distinguish between change at the individual and organisational levels. For the research reported in this paper, the focus is on organisational change. Where reference is made to any change at the level of the individual, it is in the context of the contribution of individuals to change at the organisational level.

Palmer et al. (2009, pp.222–223) reviewed nine models of planned change. While none of the models specifically focuses on developing a learning culture as part of the change process, several refer to factors that could provide a basis for research into the link between organisation culture and change. These, and factors identified by other writers, have been reviewed, and the following have been identified as providing a framework for the proposed research. The following factors are discussed in more detail below.

• organisational commitment to a learning culture
• staff involvement in the learning culture
• demonstrating the tangible benefits of a learning culture to senior managers
• leadership support for a learning culture.

The first of the above factors, a commitment to a learning culture in the organisation, is significant where the level of the commitment ensures learning develops across the entire organisation (Ravasi and Schultz, 2006). The work of Gupta and Thomas (2001) suggests commitment to a learning culture generates long-term rather than short-term
thinking, draws attention to large rather than small problems, and encourages thinking about success rather than failure.

Bates and Khasawneh (2005) argue that organisations with a strong commitment to a learning culture support the transfer of learning, value learning as a change strategy, and support innovation through continual analysis of the business environment. A learning culture also generates an openness to contradictory information, helps avoid repeating mistakes, and ensures the retention of important knowledge regardless of key people leaving the organisation (Garvin, 2000). Similarly, Hurley (2002) points out that adult learning theory tells us that people learn primarily by being encouraged to tackle challenges, experiment, fail and correct failure, and reflect on their experiences.

Change is facilitated when an organisation has a commitment to developing a learning culture as it can lead to new attitudes and behaviours, which in turn lead to changes in the organisation (Chan and Garrick, 2003). Kerr et al. (2012) argue that it is an organisation’s ‘disposition’ towards developing a learning culture that determines the type and level of learning achieved for the organisation. Organisations unable to commit to organisational learning often fail to achieve the potential benefits of learning, risk losing employee support, reduce communication effectiveness, and diminish knowledge creation and transfer (Chinowsky and Carrillo, 2007). Rowden (2001) provides a list of characteristics of learning organisations, the key ones being an emphasis on commitment to using learning to achieve goals, and the provision of continuous learning opportunities.

The second key influence of a learning culture believed to have an impact on organisational change is employee involvement in the development of the learning culture. Hurley (2002) argues that there has been an under-emphasis in the past on recognising that people are the main agents of learning and change. However, an effective learning culture empowers employees, encouraging them to consider others in the organisation when planning their work (Aksu and Ozdemir, 2005). Employee involvement in an organisational learning culture promotes cooperation at an intellectual level (Stonehouse and Pemberton, 1999), and leads to the utilisation of learning from all employees to increase organisational performance and to facilitate competitive advantage (Dymock and McCarthy, 2006; Yeo, 2005).

A further outcome of employee involvement is the development of a common set of values and beliefs on the importance, dissemination and application of learning. These shared values and beliefs function to mould perceptions and behaviours favourable to generating new knowledge and skills (Bates and Khasawneh, 2005). Employee involvement also helps organisations to adapt to new challenges presented by globalisation (Hayes and Allinson, 1998; Schwandt, 1997).

The third learning culture influence considered to have an impact on organisational change is demonstrating the tangible benefits to senior managers, particularly in terms of achieving organisational sustainability. Chinowsky and Carrillo (2007), and Marsick and Watkins (2003), argue that senior managers are more likely to provide support for developing a learning culture if they are convinced of the potential for direct financial benefit to the organisation. Change agents often find it difficult to quantify the direct financial results of learning initiatives, as they tend to generate indirect benefits (Long et al., 2013). Organisations generally find initiatives that result in short-term direct financial benefit more compelling (Chinowsky and Carrillo, 2007). However, once leaders are convinced of the benefits and give their support, this often encourages other members of the organisation to engage in the pursuit of learning leading to organisational change.
The fourth learning culture influence on organisational change identified in the literature is leadership support for an organisation’s learning culture (Chinowsky and Carrillo, 2007). Leaders who generate a vision for the role of learning need to follow this up by implementing plans to ensure the new knowledge flows across the entire organisation (Nadler, 1998). In a study of the relationships between total quality management (TQM) and organisational culture, and the impact on organisational learning, Pool (2000) found that a significant higher level of organisational learning occurs when executives support the development of a learning culture.

Some of the processes in developing a learning culture include generating dialogue with colleagues, encouraging a teamwork orientation, providing training, and rewarding employees (Aksu and Ozdemir, 2005). At the individual level, leadership support can have a strategic impact, by encouraging personal mastery of learning that in turn contributes to improved organisational performance (Dymock and McCarthy, 2006). Managerial involvement can further capitalise on individual abilities by allowing capable staff a greater degree of decentralised decision-making (Antonacopoulou and Chiva, 2007). Leadership support therefore plays a pivotal role in developing a learning culture that supports change.

Although the above review has identified four factors showing how the development of a learning culture can potentially contribute to organisational change, it shows that the literature on the relationship is limited. While a number of writers discuss learning culture and organisational change as separate entities, a much smaller number discuss the influence of the former on the latter. In addition, few of the writers who see the relationship as significant have undertaken empirical research to provide evidence to support their views. This has resulted in a gap in the literature in this area, especially in terms of research evidence to underpin theory and practice.

There also appears to be a gap in the literature on the relationship between learning culture and organisational change at the regional level. Searches were undertaken to locate prior research at a regional level to provide context for the regional research associated with this project. Unfortunately, very little material with a regional focus was found, one example being a study of learning culture in three five-star hotels in Antalya, Turkey (Aksu and Odemir, 2005). While the findings may have relevance for tourism, a significant regional industry in many countries, they did not focus on issues that were specifically regional, and therefore provide little in terms of regional context for our study in the Riverina.

Another study that initially appears to have potential regional significance is one by Bates and Khasawneh (2005) into organisations in Jordan. While not focusing on organisations at a sub-national level, the quantitative study involving 450 respondents in 28 public and private sector organisations did draw attention to broader issues of relevance to the Riverina study. The Jordanian study examined the relationship between organisational learning culture, learning transfer climate and innovation, and found that a strong learning culture, mediated by a climate that promotes learning transfer, contributed to the development of innovative products and practices.

As innovation can be considered to be a form of change that often leads to broader organisational change, the findings of the Jordanian study suggest that it would be useful in our study of the influence of a learning culture in the Riverina firms to look for aspects of innovation that lead to organisational change. Previous work focusing on innovation in manufacturing in the Riverina Region has shown that small manufacturing enterprises have been a source of innovation that has contributed to the region’s economic
development (Bamberry, 2010). Similarly, at the national level, it was found that manufacturing has been a significant source of innovation in Australia over many years (Toner, 2000). The limited regional research on the topic for this paper suggests that there is a gap in this area requiring further research, and this has been an impetus for the current study.

2.2 Research question and propositions

The following key research question emerges from the above review of the literature:

What are the key factors in the development of a learning culture that have an impact on organisational change?

The literature suggests the following key propositions as a focus for the research:

**Proposition 1:** A commitment to a learning culture within an organisation will assist in the process of change.

**Proposition 2:** The involvement of employees in developing an organisational learning culture will generate support for organisational change.

**Proposition 3:** Demonstrating the tangible benefits of a learning culture to senior managers will assist in gaining their support and contribute to organisational change.

**Proposition 4:** Having leaders who provide support for a learning culture will encourage others within the organisation to contribute to programs of organisational change.

3 Research methods

3.1 Sample

Manufacturing was chosen as the focus because of its role as a major source of learning, invention and change. As Toner (2000) points out, it is the source of much of the research and development for product and process innovation, import replacement and export expansion, is three times more likely than other industries to engage in innovation and change. Despite its decreasing proportion of GDP in the Australian economy, it remains a significant sector in terms of the levels of income and employment generated, and, as O’Connor et al. (2001, p.44) point out, it has achieved increased levels of productivity through capital investment in new technologies. While the sector’s contribution has decreased significantly in the urban areas of Australia, its contribution has stabilised or increased in many rural regions, particularly through the processing of outputs of the agricultural sector, or through the production of capital goods for that sector.

The aim of sampling in qualitative research is to make the research as manageable as possible while providing sufficient coverage of the key issues investigated to ensure confidence in the findings (Veal, 2005). This paper includes cases from the main manufacturing sectors operating in the region, including food and beverages, wool and timber, together with firms engaged in engineering and metal fabrication, as well as chemical processing.
Yin (2009) argues that between 4 to 12 cases are necessary for case study research. Accordingly, four cases were selected from each of the Riverina Region centres of Wagga Wagga and Griffith, and three from Leeton to achieve representation of the key sectors and locations. To ensure the research propositions could be explored, selection was restricted to the larger of the region’s SMEs, and those that had been established for at least five years. The sample was selected from a comprehensive database of all manufacturing firms operating in the region compiled by the Riverina Regional Development Board.

3.2 Data collection

Data was collected from 11 manufacturing SMEs through hour-long recorded interviews with the owners/managers or senior executives of each firm, due to their familiarity with all operational aspects. The qualitative nature of the research enabled close inspection of change processes involving interactions between people in day-to-day operations (Ticehurst and Veal, 2000, p.95; Kerlinger and Lee, 2000), and offered interviewees the opportunity to discuss facts, personal views, and explanations of trends (Patton, 1990).

Interviews employed a protocol based on the factors that arose from the literature review. We sought to avoid the emergence of bias by using the interview protocol to ensure similar questions were asked of all interviewees. However, the approach made allowances for different organisation types, and the amount of detail available on each firm, while ensuring as much uniformity as possible in the collection of the data.

3.3 Data analysis

Following transcription of recorded interviews, the material on each company was analysed to identify key points on the issues covered. Analysis of the interview transcripts involved content analysis through note taking on issues relating to the research propositions under keyword headings. Concise summaries on each issue were then developed, including examples from each company. Consolidating material through this process facilitated data analysis and the formulation of general findings.

3.4 Construct validity

Construct validity is generally undertaken in qualitative research through triangulation, a multiple-methods approach to obtaining different perspectives on the same issue (Lincoln and Guba, 1985). The research undertaken for this project made use of multiple sources of evidence to triangulate the data (Yin, 2009). The rationale for validating case study data through triangulation is that it avoids the research relying entirely on data from interviews, allowing the information collected from that source to be checked against information from other sources (Ticehurst and Veal, 2000). Yin (2009, p.115) comments that the use of multiple sources of evidence enables the researcher to address “a broader range of historical and behavioural issues, and to generate accurate and realistic findings”.
In this study, triangulation of the data included checking the accuracy of the information obtained from interviewees by confirming the information with other members of the firms where necessary, and by comparing the data collected with information available on the firms’ websites. Other published material was consulted, including reports on firms that had been published by the Riverina Regional Development Board. In addition, one of the authors was able to call upon extensive background knowledge of businesses in the region, having previously undertaken research for the Riverina Regional Development Board involving interviews with some of the same firms included in this study. Reference was made to the data collected for an earlier report. He had also been a member of the Riverina Regional Development Board for six years, a director on the board of the Wagga Wagga Business Enterprise Centre for 15 years, and has lived in the region and undertaken research into regional businesses for almost 40 years.

4 Results and analysis

Proposition 1: A commitment to a learning culture within an organisation will assist in the process of change.

The literature reviewed earlier in this paper drew attention to the benefits of developing an organisational learning culture with a commitment to learning. Many of the findings indicated that in circumstances where firms had a commitment to learning, there were significant implications for organisational change. One example of this is the Ricegrowers’ Cooperative. The Cooperative was established at Leeton in 1950 by a group of rice growers in the surrounding Murrumbidgee Irrigation Area to process and market the gradually expanding output of the area. It has grown in the intervening years, operating a number of rice mills and other facilities throughout the rice-growing region of southern New South Wales and northern Victoria. While supplying most of the requirements of the domestic market, much of its output is sold in international markets.

One of the problems faced by the Cooperative was the cost-effective disposal of waste products from rice processing without generating environmental problems. Organisational commitment to learning was evident in the establishment of a small research and development department involving the departmental staff, and staff in other departments. The learning process resulted in finding ways of converting the waste material into saleable by-products, including stockfeed and material for the nursery industry. This in turn led to a major organisational change where the Cooperative hived off these activities as separate enterprises, Coprice and Biocon.

A&G Engineering also provided an example of an organisation with a commitment to learning resulting in a significant organisational change, not only for the firm itself, but also for the entire industry. Founded by Ron Potter in 1963 when he was working as a winemaker for a small winery, the firm gradually built up its production of specialised capital goods to meet the particular needs of the local wine industry. Through an organisation-wide commitment to learning, the firm was able to make continuous improvements to existing equipment and products, and, through its support for research and development, it was able to develop new products and processes. The following example of this was described by the interviewee.
“When we started producing stainless steel tanks, we had a problem with them overheating in this hot climate. Discussion with the winemakers resulted in the dimple plate concept, which has enabled us to get far better temperature control. This involves putting a jacket on the outside of the tank by dimpling the plate, welding the jacket on and circulating cool brine around the tank.”

Precision Parts provided another example of organisational change resulting from an organisational commitment to learning. The founder set up an engineering partnership in Wagga Wagga after retiring from the Royal Australian Air Force in 1976, specialising in the manufacture of automotive parts, particularly harmonic balancers (Precision Parts, 2012). Due to difficulties in recruiting fully-qualified staff, the firm began recruiting young men with a farming background. The manager described the reason for this as follows.

“We find that young men from farming families in the surrounding area make suitable employees because of the skills they have gained in working with and repairing mechanical equipment while growing up on farms. This background also gives them problem-solving experience conducive to further learning.”

Through its commitment to developing a learning culture, the organisation rapidly upgraded new employee knowledge and skills through apprenticeships and in-house training to meet the organisation’s needs. This enabled the firm to implement organisational change, expand the range of manufactured motor parts, and extend its sales into international markets. Table 1 summarises the findings on the significance of an organisational commitment to learning for change in the above companies.

Table 1 Organisational commitment to a learning culture

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Observation of learning culture in action</th>
<th>Change outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ricegrowers’ Cooperative</td>
<td>Development of a research and development division working on the conversion of ‘waste’ material into saleable products</td>
<td>Creation of two new enterprises within the organisational structure</td>
</tr>
<tr>
<td>A&amp;G engineering</td>
<td>Generating collaboration to solve technical problems arising in the workplace</td>
<td>Modification of existing equipment to solve the tank overheating problem</td>
</tr>
<tr>
<td>Precision parks</td>
<td>Providing specialised training for new staff and upgrading their knowledge and skills over time</td>
<td>Additional highly skilled staff and expanded range of products and markets</td>
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</tbody>
</table>

Proposition 2: The involvement of employees in developing an organisational learning culture will generate support for organisational change.

Several interviews revealed examples of firms developing learning cultures encouraging employee involvement through collaboration and cooperation between sections within an enterprise or with clients. An example of this is Yoogali Engineering, established by an Italian migrant who initially worked for another engineering firm in Griffith before establishing his own general engineering business in 1974. He focused on repairing and manufacturing equipment for the district agricultural industry, and firms servicing this industry. Through encouraging staff to engage with co-workers and clients in a collaborative learning environment, the firm developed a better way to produce pallets.
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for the local horticultural industry, eventually resulting in the invention of a pallet-making machine.

Other examples of inventions resulting from collaboration and cooperation included the development of an orange grader, an onion washer, and lettuce harvester. In the latter case, the client “had a rough idea in his head,” and after explaining this to staff, the design work was undertaken by employees of the firm. This followed with production of the equipment by the manufacturing section. Collaboration with clients ensured the equipment met their needs, as well as meeting requirements associated with engineering design, manufacturing practicalities and cost considerations. This level of employee involvement within a learning environment has led to the establishment of new divisions to produce a new range of equipment (Yoogali Engineering, 2012).

At Parle Foods, a food-processing firm at Griffith, there was an example of a learning culture involving internal collaboration between engineering and production staff. This firm grew out of a family farm, going into manufacturing in 1990 when it began processing the gherkins it produced. It later diversified into processing other fruits and vegetables counter-seasonal to gherkins, allowing better utilisation of company resources, and reducing the risk associated with concentrating on a single product. The firm produced much of its equipment in-house, having established a large engineering workshop for this purpose. The firm bought machinery and equipment from factories closing down, and through the collective contribution of ideas for improvement from staff, they re-built the machinery to meet the company’s particular needs. The manager described the process in the following comment.

“Most of our machinery has been modified. You would not find it to be the same as anyone else’s. If other firms’ can cookers do 200 cans a minute, we’d modify ours to do 250 or 300, and that’s where we would make our money – through that extra bit. It’s not that complex technology, it just means that if we can do it more cheaply we will have an advantage over our competitors.”

Allgold Foods developed a collaborative learning culture between employees and external contractors. The manager commented that many innovations adopted by the firm emerged from discussions between staff and external contractors hired to resolve issues. The contractors had frequently worked in other food-processing establishments, had come across similar problems, and had developed solutions to the problems. As he pointed out, “as long as you are not cutting in on something that they have developed and branded, they are quite willing to share it with you”. The combination of these external ideas and the involvement of staff often led to the development of a solution. By encouraging collaborations within a learning environment, the firm was able to implement organisational change resulting in greater operational efficiency.

The interview at A&G Engineering also identified employee involvement in innovative change resulting from organisational learning. Local winemakers had commented there were problems with the concrete tanks then in use and needed to be replaced. The interviewee described the problem as follows.

“The concrete tanks needed to be replaced as they were labour intensive and dangerous. At that time, stainless steel started to make inroads into the industry, replacing concrete and wax finishes. Stainless steel is easier and safer to work with, has a long life and is easier to clean and maintain.”
Management encouraged the involvement of staff in investigating the potential to develop stainless steel vats and equipment to meet this need. Staff were encouraged to work collaboratively with the wine industry in the development of the new stainless steel equipment. These developments led to major organisational change, extending the company’s activities from being an agent for agricultural machinery and undertaking small-scale engineering jobs, to being a major manufacturer of stainless steel equipment for the wine industry (A&G Engineering, 2012). Table 2 summarises the significance of employee involvement in organisational learning culture for change.

**Table 2**  Employee involvement in a learning culture

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Observation of a learning culture in action</th>
<th>Change outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoogali Engineering</td>
<td>Collaboration between staff and clients in the invention of new agricultural equipment</td>
<td>Expansion of firm’s range of agricultural equipment and machinery</td>
</tr>
<tr>
<td>Parle Foods</td>
<td>Staff involvement in the re-building of equipment and machinery to meet the firm’s specific processing needs</td>
<td>Improved processes that increased the firm’s competitive advantage</td>
</tr>
<tr>
<td>Allgold Foods</td>
<td>Collaboration between staff and external contractors in issue resolution</td>
<td>Organisational change resulting in increased efficiency</td>
</tr>
<tr>
<td>A&amp;G Engineering</td>
<td>Collaboration between staff and local winemakers resulted in the development of stainless steel vats and other equipment</td>
<td>Major organisational change from an agricultural machinery agency to a major winemaking equipment manufacturer</td>
</tr>
</tbody>
</table>

**Proposition 3:** Demonstrating the tangible benefits of a learning culture, for instance, improved sustainability and financial outcomes contributing to organisational change.

The interviews demonstrated that convincing leaders to provide support for a learning culture contributes to organisational change generating tangible benefits. One of the cases showing evidence of this was A&G Engineering. Over a number of years, in a process of management-led continuous learning and experimentation, A&G Engineering developed the highly specialised spinning cone technology, which grew out of seeking a solution to the problem of removing sulphur dioxide from bulk-stored wine. Solving this problem resulted in the application of this process to flavour extraction from foods and beverages. This was described as follows.

“A great deal of the flavour is often lost in processing food products using heating processes. Spinning cone technology enables flavour extraction in the early stages, allowing for processes involving heating to be undertaken. Later, the flavour is returned to the product without the loss of flavour normally associated with heat processing.”

Being able to show the tangible benefits of a learning culture resulted in the extension of these new processes to other areas of food processing, to the stage of hiving off as a separate company, allowing it to become a significant exporting enterprise. The new firm, Flavourtech, established on its own premises adjacent to A&G Engineering in Griffith, with its own management, though with close links to A&G Engineering through some common membership of their boards (Flavourtech, 2012).
De Bortoli Wines demonstrates another instance where the tangible benefits generated through the development of a learning culture results in organisational change. Established by Italian immigrants at Bilbul in 1928, near Griffith, the management consists of second and third generations of the founding family. The company now has vineyards, wineries and other facilities in the Hunter, King, and Yarra Valleys in addition to the original site at Bilbul (De Bortoli Wines, 2012). The company faced the problem of liquid waste disposal in evaporation ponds, resulting in complaints from neighbours regarding unpleasant odours, and calls from the Environmental Protection Authority for remedial action. Firstly, the firm modified the chemicals used in the winemaking process to make the liquid wastes benign for use in irrigating crops. Secondly, the firm bought a neighbouring farm, undertook laser levelling, and planted crops that not only made use of the liquid waste, but also improved the fertility and soil structure. The significant organisational change resulting from this was the removal of the pollution problem while generating additional income from the crops produced.

Riverina Woolcombers, a wool processing plant established in 1979 as a subsidiary of the French multinational firm Chargeurs, is located in Wagga Wagga, as the firm identified the location as central to a large wool-producing area, with solid transport links to other areas where wool is obtainable. Staff involved in the development of a learning culture in the organisation recognised the firm could improve support service operations and costs through hiving off ancillary divisions as separate enterprises, or outsourcing services to an established firm operating within the same area. One Manager commented that such action was a necessity, “because you come to a stage where you can not reduce costs any more at the current level of operation”. Following discussions with staff, the firm decided to implement a program of major organisational change, hiving off the logistics and engineering projects divisions, and transferring its maintenance division to an established company. Table 3 summarises the significance of tangible benefits of a learning culture for change in the companies studied.

**Table 3** Demonstrating tangible benefits of a learning culture

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<tr>
<th>Organisation</th>
<th>Observation of a learning culture in action</th>
<th>Change outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>A&amp;G Engineering</td>
<td>A division of the firm that developed a flavour extraction process was able to show that it could generate a new business for the company</td>
<td>Eventual ‘hiving off’ of the division as a separate enterprise generated a new stream of income for the parent firm</td>
</tr>
<tr>
<td>De Bortoli Wines</td>
<td>Suggested solution to a waste disposal problem led to a proposal to purchase an adjoining farm with tangible environmental and financial benefits</td>
<td>Recommendations led to more sustainable use of chemicals, solution of waste disposal problem, increased productivity of farm, and generation of additional income</td>
</tr>
<tr>
<td>Riverina Woolcombers</td>
<td>Following discussions with staff, change managers were able to show senior managers that ‘hiving off’ the logistics, engineering and maintenance divisions would result in significant savings</td>
<td>Recommendations resulted in changes to organisational structure with key service functions hived off or outsourced</td>
</tr>
</tbody>
</table>
Proposition 4: Having leaders who provide support for a learning culture will encourage others within the organisation to contribute to programs of organisational change.

An example of a firm where the leadership provided support for the development of a learning culture was Celair-Malmet, a company producing air conditioners and heaters, as well as hospital equipment. The founder, Ted Celi, who had worked for the Ricegrowers Cooperative in Leeton in engineering and electrical areas, decided to establish a business in 1972 following building an evaporative air conditioner for himself, and receiving orders for others. Later, the business expanded to include the manufacture of heaters, and the firm purchased the hospital equipment manufacturer Malmet. The firm’s managers provided support for a learning culture by implementing a program of continuous review of its products. Each new model in its range of products incorporated new ideas in content and manufacturing processes as staff learnt from their experience with previous models. Later, a similar approach was used in working with contract staff producing components and providing services for the firm. The manager described an example of how the firm involved these contractors in the organisation’s learning culture.

“One of the good contractors I mentioned previously comes back to us with ideas of how to do things. If we want a job done, we don’t invent it ourselves now. We just ask him how he would do it, and ask him to come back to us with a quote. He’s quite skilled in that way.”

Buckman Laboratories, a privately owned US-based company founded in 1945, established a chemical processing factory in Wagga Wagga in 1993, specifically to supply customers in the paper manufacturing industry located in Australia and New Zealand, and to a lesser degree Singapore. The firm does not seek to export to other markets. Being mid-way between key customers in Sydney and Melbourne, as well as having easy access to ports, made Wagga Wagga a suitable location for the factory. Leadership support for a learning culture was evident in the role taken by Senior Managers in negotiating with other nearby companies involved in the production or handling of chemicals to set up a joint training program on the safe handling of chemicals. This was described as follows.

“We have contacts with Roche for general discussion on matters such as certain manufacturing techniques involving chemicals, safety systems, handling of contractors on site and other information exchange. We also have contacts with other firms that use chemicals such as Riverina Woolcombers, where we discuss safety issues and training. We have run some joint training programs with these firms.”

A key aim of the program was to embed learning about safety with chemicals into the firm’s learning culture. The senior manager interviewed believed that this had occurred, with the number of accidents involving chemicals having decreased.

Another example of a firm where having leaders who provided support for a learning culture led to change was De Bortoli Wines. Recognising the need for better-qualified staff, the firm’s management made representation to the Riverina Institute of Technical and Further Education (TAFE) to provide training courses specifically for people working in the wine industry. The interviewee reported on the outcome of the firm’s approach to TAFE.
“Subsequently, a member of the management team received an invitation to serve on a TAFE advisory committee with other managers from the food-processing sector in the Griffith area. This led to TAFE offering courses at Griffith specifically designed for the sector, helping us to recruit better-qualified staff, and to obtain further training for existing staff.”

A further example of leadership support for the development of a learning culture was Allgold Foods, where management led the process of research and development through direct involvement with staff working in the factory, rather than through a separate research and development department. Much of this involvement by the managers was based on their previous experience working as engineers at the Ricegrowers’ Cooperative, combined with learning experiences in the new firm. They worked with staff to adapt the processes of rice milling to the milling of other grains, making modifications to machinery and processes as they gained experience operating the plant, and as they sought to improve the quality of their products to meet clients' specifications. As a result of this support for learning, the firm was able undergo major organisational change, extending its range of activities and developing to a point where it was able to establish a joint venture with an international food-processing firm, eventually merging with that company. Table 4 summarises examples of leadership support for a learning culture resulting in organisational change.

Table 4  Leadership support for a learning culture

<table>
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<tr>
<td>Celair-Malmet</td>
<td>Leaders supported a program of continuous improvements based on learning from experience with earlier models</td>
<td>Changes to products, takeovers of other companies and expansion into export markets</td>
</tr>
<tr>
<td>Buckman Laboratories</td>
<td>Leadership support for the development of a training program on the safe handling of chemicals</td>
<td>Changes resulting in embedding safety into the learning culture of the firm and fewer accidents</td>
</tr>
<tr>
<td>De Bortoli Wines</td>
<td>Management extended its existing learning culture by participating in the local TAFE advisory board</td>
<td>Support for training courses by TAFE resulted in improved opportunities for new and existing staff</td>
</tr>
<tr>
<td>Allgold Foods</td>
<td>Direct involvement of managers with staff in research and development activities on the shop floor</td>
<td>Changes to the range of activities undertaken by the firm and later development of a joint venture</td>
</tr>
</tbody>
</table>

5 Conclusion

**Proposition 1**: A commitment to a learning culture within an organisation will assist in the process of change.

The findings of the research have implications for theory in providing further insight on how a learning culture contributes to organisational change. The findings demonstrated organisational commitment to a learning culture generally occurred across the entire
organisation, as suggested by Ravasi and Schultz (2006). In addition, commitment to a learning culture resulted in the types of change identified by Gupta and Thomas (2001): continuous learning throughout the organisation, long-term thinking, permanent changes to organisational structure, a focus on large rather than small problems, improved staff productivity, an increased range of products, and expanded markets. From the information provided by interviewees, it appeared the organisations valued learning as a change strategy, there was support for the transfer of learning within the organisations, and attitudes and behaviours were supportive of organisational change (Chan and Gavicuk, 2003) (see Table 1).

**Proposition 2:** The involvement of employees in developing an organisational learning culture will generate support for organisational change.

The research findings support Proposition 2. There was a high level of employee involvement in the development of the learning cultures of the firms included in the study, and this contributed to organisational change in a number of ways similar to those described by Aksu and Ozdemir (2005), and Stonehouse and Pemberton (1998). Examples included collaboration and cooperation between staff and clients in the development of new agricultural equipment, empowering staff to take the initiative in re-engineering equipment and machinery to meet specific processing needs, and extending existing knowledge to solve specific problems in collaboration with external contractors. The organisational changes emerging from these developments included increased competitive advantage through improved efficiency and increased output, an expanded range of products (Dymock and McCarthy, 2006; Yeo, 2005), behaviour favourable to generating new knowledge and skills (Bates and Khasawneh 2005), and adapting to new challenges presented by globalisation (Hayes and Allinson 1998; Schwandt, 1997) (see Table 2).

**Proposition 3:** Demonstrating the tangible benefits of a learning culture, for instance, improved sustainability and financial outcomes contributing to organisational change.

The ability to demonstrate financial and other benefits, as described by Chinowsky and Carrillo (2007), and Marsick and Watkins (2003), is evident in several of the firms studied. For instance, A&G Engineering was able to generate additional income by creating new products, De Bortoli Wines was able to make savings in the use of chemicals, and Riverina Woolcombers was able to achieve savings and greater efficiency by hiving off and outsourcing some of its functions (see Table 3).

**Proposition 4:** Having leaders who provide support for a learning culture will encourage others within the organisation to contribute to programs of organisational change.

Leadership support for the development of a learning culture was found to influence change through decentralising decision making, implementing plans to ensure the flow of information throughout the organisation, encouraging team work, and providing training (Aksu and Ozdemir 2005) as well as through the personal involvement of leaders in facilitating learning (Nadler, 1998; Dymock and McCarthy 2006). Examples of these aspects of leadership included support for programs of continuous product improvement, support for training programs in the chemical and wine industries, and the direct
involvement of managers in research and development activities on the shop floor. These levels of leadership involvement contributed to organisational changes such as the expansion of the range of products, entry into export markets, improved workplace safety, expanded training opportunities for staff, structural changes such as takeovers of other companies, and the development of joint ventures (see Table 4).

5.1 Implications for regional organisations

In addition to the conclusions arising from the findings outlined above, tentative conclusions can also be drawn on the regional implications of the research. Observations based on the interviews suggest that the influence of a regional SME’s learning culture and organisational change can be summed up as being characterised by the following:

- innovation and change tend to result from solving problems that arise in the day-to-day operations of enterprises
- solutions to one problem give rise to further problems that are in turn solved
- innovation and change also occur as a result of learning by using and doing in daily operations
- as a result of the above learning processes, innovation and change tend to be incremental, though occasionally the change can be radical
- the existence of a learning culture within regional SMEs provides significant support in generating innovation leading to organisational change
- leadership support for the development of a learning culture may be more significant in regional SMEs because the smaller size of the enterprise allows managers to interact more closely with staff, and to become more directly involved in the learning process
- a firm’s learning culture is supported by close interaction of staff with customers and clients in meeting their needs and requests, leading to potential innovation and change
- the development of a learning culture may also be assisted through external contacts by sharing knowledge and experience with goods and service providers, and by participating in industry associations and networks at a regional level.

5.2 Implications for theory and practice

The conclusions emerging from the research findings contribute to theory by assisting in explaining more clearly the relationship between learning culture and organisational change. The research also shows that the theoretical constructs emerging from the literature review, and used as the basis of the propositions investigated in the research, are appropriate as the basis for research in the area. The findings have practical value for organisations in general, and regional manufacturing SMEs in particular, in suggesting how the development of an organisation’s learning culture can generate organisational change to benefit the competitiveness, sustainability, and growth of enterprises in both domestic and export markets.
5.3 Implications for future research

The findings also have implications for future research. Longitudinal studies across a broader range of enterprises would provide an indication of whether the factors identified have a long-term impact on organisational change. Further studies may identify additional factors with further implications for theory and practice.

5.4 Limitations of the research

As the research for this study was limited to case studies in a single region, there are limitations as to the extent that the findings can be generalised, particularly in terms of what can be said about specific characteristics of learning cultures in regional organisations. There are also limitations in terms of the research methodology used. Because of the lack of prior research in the area with a regional focus, the constructs identified from the literature, while relevant for organisations in general, and which were found to be useful in this research, may not be the most suitable for the study of regional organisations. Further research at the regional level will be needed to identify the most useful constructs.

References


