CI in the work place: does involving the HR function make any difference?

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Abstract

Learning and continuous improvement are linked and learning must be central to CI and a culture that supports CI. Learning needs to be both individual and organisational and must benefit the organisation's performance. The HR department is often given the task of championing of culture change, and it appears that involvement of HR professionals would enhance CI efforts and assist in the timely solution of issues within the CI process. This paper aims to determine the influence of involving HR professionals in CI, and if their involvement has any impact on support and tools used in CI and the contribution of CI to business performance.

Keywords: continuous improvement, people, learning, human resources

Introduction

A focus on strategic human resource development has been emphasised as a key contributor to ensuring organisational effectiveness and the maximum return from their most important asset, the people in the organisation. It has been argued that effective management and innovative approaches to the development of employees will enable organisations to capture and embed knowledge and skills. Organisations that are seeking not only to survive, but to maximise operational effectiveness in an ever-changing environment, need to ensure that at all levels, the human resource development strategy is aligned with broader strategic imperatives, and that sufficient emphasis is placed on the human resource (HR) function. It is a role of management to ensure that the organisation and its people acquire the competencies and knowledge it needs through education, training and development activities. In manufacturing firms seeking to achieve improved performance through systematic change processes such as Continuous Improvement (CI), it is important that the human resource development function plays a role in the CI process.

This paper examines continuous improvement activities reported in a survey sampling 543 manufacturing organisations in Europe, Australia and South East Asia. It compares the motives of firms using CI who have involved the HR function in CI with those firms where the human resource function has not been involved. This paper also compares the usage of tools and support for CI and the extent that CI has contributed to business performance, comparing firms that have involved HR with those that have not involved the HR function.

Learning and Strategy

Sustaining a competitive advantage increases the probability of long-term survival and financial success of the organisation (Kuratko, Ireland, & Hornsby, 2001). It has been argued that in the knowledge era, the effective involvement, management and development of staff can obtain this competitive advantage. In turn, the most strategic way to invest in people is through learning activities. Carneiro (2001) argues that an organisation's capacity to exploit its knowledge and learning capabilities should be one of its competitive strategies. Cullen (1999) further highlights the significance of both individual and organisational learning in order to develop organisational capacities. Boer et al (2001) present learning aspects similar to Cullen (1999), but they believe organisational capacities enable learning behaviours to develop across the organisation. So to remain internationally competitive, firms seeking to improve their position and processes must sustain a high level of learning that both refines current practices and capabilities and develops new ones. Human resource development has evolved as a critical element of broader business and human resource management strategies. The importance of an appropriately skilled and developed workforce is recognised by many in business as essential to the implementation of continuous improvement programs.

Continuous Improvement

CI methods have become widely adopted and are regarded as being an important component of increased company competitiveness. McAdam, Stevenson and Armstrong (2000) argue that development of a CI culture by companies is strongly associated with the development within companies of an innovation culture. The proposition that a CI culture gives rise to an innovation culture is of particular significance if one takes the view that development of an innovation culture is critical to the ability of companies to develop and take new strategic directions, while CI merely enables a company to be more successful in pursuit of a specific strategy or set of objectives. According to Biazzo and Bernardi (2003), organisational capabilities for sustainable and incremental innovation can only be developed by a number of behavioural routines. Specifically, Bessant and Caffyn (1997) suggest that these routines include the ability to generate sustained involvement in continuous improvement; link continuous improvement activities to the strategic goals of the company; move continuous improvement activity across organisational boundaries; manage strategically the development of continuous improvement; articulate and demonstrate continuous improvement values; and learn through continuous improvement activity.

CI has many attractions, one of the most important being a potential low cost approach. However, Bessant and Caffyn (1997) note that despite the attractions, the technique can often fail. Successful CI requires long term organisational commitment to a course of action and the development of a consistent set of shared values or beliefs. The key to the success of continuous improvement is an ongoing process of plan (planning improvements); do (implementing improvements); check (whether expected performance have been achieved); and act (standardise the new practice). Among the major potential benefits of continuous improvement are increased business performance in terms of reduced waste, set-up time, stock, handling, breakdowns, and lead time, and staff performance in the form of improved development, empowerment, participation, involvement and quality of work life of employees. The role of ensuring enhanced

people performance usually lies within the human resource function, and this means that firms seeking to maximise the benefits of CI should ensure that the human resource function is involved. The problem with continuous improvement is that the concept, which at first sight appears to be very simple and attractive, is often difficult to design, implement and develop successfully. Mature continuous improvement requires 'learning to learn', or learning to improve ever-more efficiently and effectively, and to tackle ever-more complex improvement problems and challenges both within and across organisational elements of supply chains (Gieskes, Hyland, & Magnusson, 2002).

Effective and sustainable continuous improvement of the manufacturing function requires strategic approaches within the organisation that enable managers to be able to think globally about the organisational needs, but act locally in response to those needs. The global issues for the organisation reflect the competitive priorities of the market. Kaye and Anderson (1999) maintain that to meet today's rapidly changing business environment, characterised by uncertainty and unpredictability, businesses need competitive continuous improvement activities. This allows organisations to be responsive and able to adapt their strategy quickly on the basis of feedback from customers and from benchmarking against competitors. However not all organisations have the same capacity and capabilities for improvement. Some manufacturers are more mature than others in terms of CI capability, and not all organisations have developed the same learning capabilities.

As all organisations are not equal, management needs to select and develop the capabilities that best suit their needs and the needs of the organisation. In this way, managers develop local tactics that flow from local conditions, which complement the local organisational capabilities yet are consistent with global needs. Managers then need to foster the development of local complementary tactics and ensure that they are integrated with the wider strategy of the company. Campbell and Alexander (1997) identified that many managers believe there is a structure and order to strategy development that should be followed. However Mintzberg (1987) argued strategy making does not occur in isolation, rather it is a process interwoven with all that it takes to manage an organisation. Campbell and Alexander (1997) also argue that tactics need to be worked out before strategy can be determined, and any subsequent strategy needs to be clear in order to define organisational objectives.

CI activities, which should be related to the broad strategies of the business, appear to be focused more on manufacturing issues of cost reduction and product quality. The range of tactics being employed at an operational level is not necessarily being integrated through the use of the competitive priorities of the business. These tactics are presumably being driven by local needs. While this may lead to the occasional lucky outcome, it is more likely to produce local benefits that do not gain the synergy of supporting a major strategy. Many firms have recognised that they need to create an environment conducive to learning and the acquisition of knowledge if they are to strategically manage their improvement activities. Learning needs to become central to ongoing organisational development and improvement.

Learning and Work

CI is based on individuals and teams learning to improve the systems and operations of a business. Learning is central to CI and in many businesses the HR function is charged

with the responsibility of ensuring learning is structured in ways that benefit employees and delivers a return to the organisation. Most firms are now attempting to develop systems to capture the knowledge and skills of workers and utilise these in ways that make them more transferable. According to Nonaka (1991), new knowledge is not simply processing objective information, but rather, tapping the tacit and often highly subjective insights, intuitions, and hunches of individual employees and making these available for testing. Explicit knowledge can be expressed in words and numbers and shared in the form of data, scientific formulae, specifications, and manuals. Tacit knowledge on the other hand is highly personal and hard to formalise, and therefore difficult to communicate and share with others. Nonaka and Takeuchi (1995) suggest that knowledge creation is a spiralling process of interaction between explicit and tacit knowledge. In essence, the process can be described as a series of steps creating "shared space for emerging relationships" (Nonaka & Konno, 1998 p. 40). This process of knowledge storing, creation, and sharing, is synonymous with organisational learning. Tacit knowledge is a way of describing an individual's worldviews, is deeply embedded in individual action and experience (know-how), and can only be usefully accessed if the organisation has the appropriate learning mechanisms in place.

The core capability of the firm according to Leonard-Barton (1992 p.113) is the "knowledge set that distinguishes and provides a competitive advantage". Leonard-Barton (1992) further believes that four dimensions typified this knowledge set: employee knowledge and skills; technical systems; managerial systems; and values and norms. Leonard-Barton (1992) contends that the first of these is the one most associated with core abilities as it encompasses at an employee level, both firm-specific techniques and scientific understanding. In the second dimension, knowledge is embedded in technical systems resulting from years of accumulating, codifying, and structuring the tacit knowledge in peoples' heads. Essentially, it is possible for core capabilities to be institutionalised as part of these dimensions within the organisation, in turn providing a competitive advantage.

There is a need to provide a context in which the knowledge creation trajectory can be usefully implemented in practice, where standard routines are challenged, and where new routines can be turned into improved actions. The socialisation process at work is evident in the way knowledge is shared. All employees can be encouraged to appreciate the self-reinforcing nature of knowledge-creating activities. Each activity is the operational expression of an underlying value and theme found in a number of organisational sub-systems that need to be mutually aligned and interrelated. Leonard-Barton (1992) contends that organisational competencies, without organisational learning, are similar to paradigms that have internal consistencies that make evolutionary change or adaptation nearly impossible. So organisations need to develop the organisational competencies that enable them to effectively manage their knowledge, but do it in a way that encourages organisational learning and provides for effective management of knowledge. The HR function plays a significant role in putting in place human-centred systems that effectively manage knowledge acquisition and development. Pollitt (1999) maintains that organisations can acquire knowledge skills or competencies through several mechanisms. For example to gain skills and competences many firms borrow competences rather than develop them in-house. This is most commonly done by using consultants or short-term contract labour. When there is an available pool of skilled labour, organisations can buy skills and knowledge through external recruitment or they can build competences and knowledge by investing

in the existing workforce. In the latter case, however, management needs to ensure that training benefits the firm and adds to the organisational intellectual capital not just to the individual's intellectual capital. It may be the case that many managers are unaware of the complexities involved in training and developing the intellectual capital within their organisations, and hence allow employees to driving the training agenda. As Renaud, Lakhdari and Morin (2004) argue, training of the labour force is becoming increasingly important and it is an issue that involves trade unions, businesses and governments.

Myburgh (2000) argues that whatever else an organisation may do, it must generate, acquire, process, and use information to develop knowledge. Many organisational activities require or depend on satisfactory information flows. Such activities include monitoring of the organisation's performance; assessing the possibility of breakdowns; creation and communication of instructions, advice, and policies; exchange of experience and knowledge; scanning the business environment; and the making of major and minor decisions. Information must be appropriately managed so that the organisation can understand and progress toward goals; inform the decision-making processes; and communicate to groups inside and outside of the organisation. In many organisations groups of employees often based within professional silos such as engineers, accountants, scientists or technicians, jealously guard their own knowledge and information and fail to share it with others in the organisation. To maximise the organisation's benefits from the information and knowledge its members hold or can acquire, collaboration across professional boundaries is required of individuals. As Amidon (1998) asserts, the creation of knowledge takes place in communities of practice, where individuals with different backgrounds collaborate and share information. This acquisition of knowledge needs to result in improved performance if it is to be of real benefit to the firms involved. Research reported by Almeida-Santos and Mumford (2004) indicates that returns such as increased productivity can be attributed to training programs. Importantly they also found the benefits and returns were far better when the training was facilitated by a good human resource management structure. It is proposed here that the involvement of HR management in CI activities should result in better firm performance than exists in firms where HR is not involved.

In the right environment and circumstances, a nurturing process may encourage the development of new knowledge that employees can share with others for the benefit of the organisation. One of the challenges for management is to create an environment that values and recognises those employees who are willing and able to share their knowledge freely. The development of such an environment is often the domain of human resource (HR) professionals. In many organisations it is the HR function that is responsible for activities that lead to improved employee commitment and attitude, and the HR function is usually responsible for managing training that increases employees skills and competencies.

In summary, to be competitive, organisations must engender an environment where CI is the focus and individuals are trained, motivated and rewarded for their learning and CI activities, and the sharing of knowledge. Organisational learning also needs to be recognised as an important component of CI, with emphasis placed on organisational systems, routines and activities that encourage rather than stifle learning and development. The HR department is often tasked with the championing of such a culture, and it is often claimed that involvement of HR professionals should enhance CI

efforts and assist in the timely solution of issues within the CI process. This paper aims to determine the influence of involving HR professionals in CI, and if their involvement has any impact on support and tools used in CI and the contribution of CI to business performance.

Methodology

The research being reported is part of a substantial ongoing international investigation of CI in Australia, Europe, and South East Asia focused on intensive case studies and survey research. The survey research commenced in mid 2000 and by 2003 a substantial dataset had been amassed, with this paper reporting on the results of 543 surveys received from manufacturing organisations in Europe, South East Asia and Australia. Where possible the surveys were conducted in English, but translations into the language of the participating countries were produced to enable the participation of managers without English fluency. Care was taken here to ensure that the intended meanings of questions were retained in the translation. The European countries included: Ireland, Italy, the Netherlands and Sweden. Within this sample 250 firms reported that HR were involved in improvement activities, 231 firms reported no HR involvement in improvement activities while 62 firms that did not disclose the required classifying information.

Results

The CI process was more widespread in firms that involved the HR function in the CI process than in firms that did not involve the HR function. As can be seen in Table 1, continuous improvement is integrated into every day life in firms involving the HR function. Those that don't involve HR report only occasional improvement activity. In most cases the quality department is always involved in CI, but the HR department is as likely to be involved as marketing, maintenance, after sales service or finance. It should be of concern that maintenance and HR in particular are often excluded from the CI process.

	No improvement activity	Occasional improvement activities	Regular improvement activities	Frequent improvement activities	Improvement is integrated part of daily life
	1	2	3	4	5
	HR involved (Mode)			HR not involved (Mode)	
3c.1 Managing director/ management team	5			2	
3c.2 NPD department	5			2	
3c.3 Engineering department	5			3	
3c.4 Production department	5			3	
3c.5 Marketing & sales department	3			2	
3c.6 Logistics department	3			2	
3c.7 Quality department	5			5	
3c.8 Maintenance department	3			2	
3c.9 After sales service department	3			2	
3c.10 Financial department	3			2	
3c.11 Personnel/HRM department	3			2	

Table 1. Spread of improvement activities in firms

Regardless of the involvement of HR professionals, CI is seen as critical when customers require it, when cost reductions are sought, and when a firm wishes to increase customer satisfaction (see Table 2 - these variables all have a mode of 1). It is evident in Table 2 that firms seeking to increase employee skills and competencies, or increase employee commitment and attitude towards change, are more likely to involve the HR function; and to a lesser extent firms seeking improvements in safety and working conditions, or supplier relations, or a decrease absence, will be more likely to involve the HR function.

Motives for working with CI	**Of critical importance** 1----2----3		**Not important** 4----5	
	HR involved		**HR not involved**	
	Mode	**Mean**	**Mode**	**Mean**
4.1 Because our customers ask for CI	1	1.91	1	1.93
4.2 Increase production volume	2	1.88	2	2.04
4.3 Increase productivity+	2	1.75	2	1.78
4.4 Improve quality conformance	1	1.40	2	1.66
4.5 Reduce lead times	1	1.65	2	1.97
4.6 Improve delivery reliability	1	1.63	2	1.89
4.7 Improve safety and working conditions	1	1.73	2	2.14
4.8 Cost reduction	1	1.48	1	1.80
4.9 Higher customer satisfaction	1	1.32	1	1.53
4.10 Improve administration routines	2	2.14	2	2.50
4.11 Increase employee commitment/attitude towards change	2	2.05	3	2.51
4.12 Improve organisation, co-operation and communication	2	1.81	2	2.28
4.13 Increase employee skills and competencies	2	1.84	3	2.40
4.14 Because CI is a management directive	3	2.56	3	2.96
4.15 Decrease absence	3	2.68	4	3.22
4.16 Improve supplier relations	3	2.40	4	3.01
4.17 Improve customer relations	1	1.56	2	1.95
4.18 Improve relations between departments	2	1.82	2	2.34

Table 2. Motives for working with continuous improvement

In relation to tools and techniques employed to establish incremental improvement, an examination of Table 3 reveals that factors such as face to face communication and regular shopfloor visits by management are equally important regardless of the involvement of the HR Function. The three factors that have the greatest difference based on HR involvement are incentive systems, promotion on noticeboards and

promotion through internal media. This may indicate that more forms of communication are used by the HR function than would be employed by a quality department or operations manager.

Frequency of Use of CI Tools and Techniques	Very frequently 1----		Rarely ---5	
	HR involved		HR not involved	
	Mode	Mean	Mode	Mean
7.1 Use of slogans	5	3.5	5	3.6
7.2 Training of personnel in problem solving tools	3	2.7	3	3.1
7.3 Monitoring the improvement activities (measures, follows-up)	2	2.2	3	2.6
7.4 Support from managerial staff	2	2	2	2.6
7.5 Incentive systems	3	3.1	5	3.7
7.6 Supportive leadership	2	2.3	3	2.8
7.7 Work in teams/work groups	2	2	3	2.5
7.8 A suggestion scheme	3	3	5	3.4
7.9 A general problem solving format (e.g. PDCA-cycle)	3	2.8	3	3.4
7.10 Promotion on notice boards	3	2.7	5	3.3
7.11 Promotion through internal media (magazines, newsletter)	3	2.9	5	3.5
7.12 Promotion through competitions and awards	5	3.8	5	4
7.13 Face-to-face communication	2	1.9	2	2.2
7.14 Regular shop floor visits by management	2	2.1	3	2.4
7.15 Use of ISO 9000 / 2000, or any other quality standard	1	1.6	1	1.9
7.16 Use of Total Productive Maintenance	3	2.9	5	3.4
7.17 Quality awards (e.g. Baldrige)	5	3.8	5	4.1
7.18 Formal policy deployment	3	2.7	3	3.2

Table 3. Tools and techniques used to establishing incremental improvement in firms

Having measured the extent to which CI is used, the motives for adopting such practices, and the tools and techniques employed, the ultimate assessment of CI activity is the measure of its effectiveness in relation to performance indicators. A range of performance indicators were assessed by respondents and the results experienced by those involving the HR function in CI initiatives were compared against those who did not. These results are shown in Table 4. Regardless of the involvement of the HR

function, several areas were seen to have improved and the areas where CI had had a large positive effect included customer satisfaction, productivity, quality conformance, customer relations and finally, organisation, cooperation and communication.

Performance Indicators	To a large extent 1---2	To some extent 3---4	Not at all ---5
	HR involved	HR not involved	
11.1 Increased production volume	2	3	
11.2 Improved administrative routines	3	3	
11.3 Increased productivity	2	2	
11.4 Improved quality conformance	2	2	
11.5 Improved delivery reliability	2	3	
11.6 Reduced lead times	2	3	
11.7 Reduced cost	2	3	
11.8 Higher customer satisfaction	2	2	
11.9 Decreased absence	4	5	
11.10 Improved safety and working conditions	2	3	
11.11 Increased employee skills and competences	2	3	
11.12 Increased employee commitment/attitude towards change	3	3	
11.13 Improved organisation, cooperation and communication	2	2	
11.14 Improved supplier relations	3	3	
11.15 Improved customer relations	2	2	
11.16 Improved relations between departments	2	3	

Table 4. The extent CI has contributed to performance over the last three years

A slightly smaller effect was noted in improved administrative routines, increased employee commitment or attitude towards change and improved supplier relations. Although involving the HR function appeared to give a slightly better result in decreasing absenteeism, it was not a major performance issue for CI activities.

Conclusion

The findings of the research presented in this paper support the contention that when the human resource function is involved in CI activities the outcomes better serve the organisations involved. When the strategic approach taken to managing CI includes the human resource function, the alignment of learning and strategy pay off for the firm. The firms in this study reported learning in areas such as communication, employee commitment to change, improved employee skills and competences to be more evident

where HR professionals were involved in CI activities than in firms not involving the HR professionals. It appears that the respondents considered learning at an individual level to be useful, whilst at the organisational level, they did not necessarily see any demonstration of widespread support for improvement.

It is also noted that those firms that include the human resource function in their CI activities should be able to draw upon additional expertise and capabilities that enhance learning and build the capabilities that engender a better CI performance outcome, but the firms in this study did not report this. However in this study the firms involving the HR function appeared to only utilise it in a minor role through involvement in establishing incentive schemes and in internal promotion via notice boards and other media. They do not appear to have used HR to their strategic advantage. Firms seeking to implement CI appear not to involve the HR function unless they see the organisational culture is in need of change. Managers wishing to minimise the problems of implementing CI and maximising the returns would do well to include the human resource function in a broader range of CI activities.

Firms in this study that involved the HR function reported a greater tendency for CI tools and techniques to be more varied, and for the management team to be involved on a daily basis with CI activities. As the early work by Bessant and Caffyn (1997) argues, CI is a people centric process and as such requires leadership and commitment by senior managers. It would be expected that all departments or functional units are more likely to support an improvement process supported and driven by senior management. The HR function can play a significant role in any change process, but their involvement needs to be supported with both time and money, and the senior management team needs to be committed to involving all functions in a culture of continuous improvement.

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