SUCCESSFUL IMPLEMENTATION OF KNOLEDGE MANAGEMENT IN SMALL AND MEDIUM ENTERPRISES

Marius-Dan Dalotă[*]

Abstract

Knowledge has become one of the critical driving forces for business success. Organizations are becoming more knowledge intensive and the needs for leveraging the value of knowledge are increasing. Organizations need to be cognizant and aware of the factors that will influence the success of a knowledge management (KM) initiative. The effective implementation of KM in small and medium enterprises (SMEs) is governed and facilitated by certain factors. Organizations can certainly benefit from a more thorough understanding of the factors that are critical to the success of KM. The adoption of factors which are not suitable can impede the achievement of the desired performance.

1. Introduction

The development of a knowledge-driven economy has become a key priority for both local business development agencies and central government as the way forward to sustain economic growth and enhance skills levels across all sectors. Within what is known as the knowledge economy, at the level of SMEs, developing strategies to differentiate the organisation in the marketplace, creating knowledge in the organisation and utilising human assets are essential ingredients for success. For the SMEs within a specific cluster to be effective in their broad business development, investment in good practice human resource management activities and the identification and development of talent are key.

In order to respond positively to the rapidly changing environment and to perform effectively in spite of uncertainty, firms need to devote much of their time and effort in listening carefully to their customers, while at the same time participating in the development of their organizations so that they are able to effectively respond to the changing business environment.

Traditional forms of management for successful SMEs of the future will not be sufficient to meet these changing demands and a wider participation in the development of the organization and management of the business process will be vital ingredients for future organizational effectiveness. While the notion of the learning organization is not yet clearly defined and many authors on the subject have

---

[*] Marius-Dan Dalotă is Professor of Management at the Romanian American University in Bucharest. E-mail: marius_dalota@yahoo.com

difficulty in reaching agreement as to the exact nature of, and the key ingredients of, the learning organization, many are agreed on the benefits.

The foundation of organisational competitiveness in the contemporary economy has shifted from physical and tangible resources to knowledge. The key focus of information systems has also changed from the management of information to that of knowledge.

Many organisations are increasingly viewed as knowledge-based enterprises in which formal knowledge management (KM) is essential. Nowadays, KM is rapidly becoming an integral business activity for organisations as they realise that competitiveness pivots around the effective management of knowledge.

2. Action learning SMEs

Action learning is a means of development, intellectual, emotional or physical that requires its subject, through responsible involvement in some real, complex and stressful problem to achieve intended change, sufficient to improve his intended behaviour henceforth in the problem field [1]. There are several questions which have arisen by SME owner managers from the literature, and which would need to be addressed in order to convince them that power sharing in the organization through widening questioning and reflection would be beneficial to the business:

a. If the learning organization model is so effective in terms of business performance, why isn't it more widely used?

Entrepreneurs according to the literature are by nature individualistic, desire almost total control on the direction and policies of the organization and find delegation difficult. This constraint can be further exacerbated when direct control of the company is in the hands of a family oligopoly. Another barrier (as shown in literature) emerges from negative feelings of SME owners and managers directors towards the higher education sector in general and academic research in particular.

b. Why entrepreneurs find it difficult to share power?

As some of the high profile entrepreneurial icons who were casualties of the late 1980s and early 1990s have demonstrated the nature and structure of organizations do change through time. Concomitant perhaps with those changes to the structure come a requirement for a shift in management emphasis from entrepreneurship to professional management.

c. When we are struggling for survival, we have not got the time to be engaging in esoteric discussion and learning. We need immediate results?

The company then has the opportunity for more empowered and enabled people to navigate effectively through change and uncertainty. Indeed, it is a key role of management to manage change effectively, in order to generate a learning culture within the organization which produces the climate not only to survive but to flourish.

d. How can we implement a learning model in a practical context when the concept of the learning organization is so difficult to tie down?

The learning company is not a standard formula to follow, or a proven winning formula to be benchmarked and imitated. It is a proposal, an invention and a broad

concept that is the best suggestion that can be made about how work and organizations proceed in this period of history. It is for us all to experiment with responsibility and imaginatively through a process that will itself be one of learning and discovery [2].

e. Isn't extending effective marketing effort in the organization going to produce improved profits, not extending learning?

One of the key strengths of the SME sector is their closeness to the customer. The knowledge which the SME marketer has of his or her customer base and their businesses enables change in terms of the individual customer demand and signals from the market to be perceived and managed in a speedy and effective manner. The critical challenge for any business is to create the combination of culture and climate that maximizes organizational learning on how to create superior customer value in dynamic and turbulent markets, because the ability to learn faster that competitors may be the only source of competitive advantage.

The learning culture and climate created by action learning produces the trust, openness, flexibility and eventually effectiveness which lead to the competitive of advantage.

3. SMEs factors in accomplishing KM

In the literature are indicated numerous factors that had been identified as important for accomplishing KM. Although different researchers have used different terminologies to indicate these factors, they can be represented by generic themes. Based on the literature, the basis for KM adoption in the SME sector are [4]:

- *leadership and support;*
- *processes and activities;*
- *motivational aids;*
- *resources;*
- *culture;*
- *information technology;*
- *strategy and purpose;*
- *measurement; organisational infrastructure;*
- *training and education;*
- *human resource management.*

The top three factors according to the SMEs are recognized by literature to be "senior management support and leadership", "a knowledge-friendly culture" and "a clear strategy for managing knowledge", while the bottom three were "development of a technological infrastructure", "incentives to encourage KM practices" and "measuring the effectiveness of KM". With regard to the "contributors", "senior management support and leadership", "a clear strategy for managing knowledge", and "a knowledge-friendly culture" were ranked the highest, while "roles and responsibilities for KM", "development of a technological infrastructure" and "measuring the effectiveness of KM" were the least critical.

In order of importance (ranked from the highest to the lowest) for implementing KM in the SME sector are [6]:

   I. *management leadership and support;*
  II. *culture;*
 III. *strategy and purpose;*
 IV. *resources;*
  V. *processes and activities;*
 VI. *training and education;*
VII. *human resource management;*
VIII. *information technology;*
 IX. *motivational aids;*
  X. *organisational infrastructure;*
 XI. *measurement.*

The specialists argue that there are differences in the perceived importance of factors for adopting KM, between large and small businesses. Successful KM in SMEs requires proactive entrepreneurial support and leadership from top management. Besides its importance, the fact that this factor was ranked the highest means that it should be addressed first, before dealing with the other critical success factors. Top management or leaders should devote themselves to promoting a corporate mindset that emphasises co-operation and knowledge sharing across the organisation. They should also contribute to the creation of an environment in which knowledge creation and cross-boundary learning can flourish. More essentially is for them to provide continual support and commitment to initiate and sustain the KM effort.

The second most important factor, culture, indicates that a knowledge-friendly cultural foundation is certainly more important than the deployment of information technology in KM. It has been asserted that the success of KM is 90 per cent dependent on building a supportive culture [4]. Important facets of a knowledge-oriented culture include such attributes as trust, collaboration and openness.

Another important criterion for effective KM is to have a clear strategy and purpose. A rational strategy helps to clarify the business case for pursuing KM, and steer the company towards becoming knowledge-based. In addition, it provides the essential focus, as well as values for everyone in the organisation. SMEs differ from large companies, because they suffer from resource scarcity. Consideration of resources' availability as well as their proper allocation and management are therefore of prime importance for SMEs in adopting KM.

It is also crucial not to overlook those factors which were ranked to be less important such as information technology, motivational aids, organisational infrastructure and measurement. It is indisputable that information technologies such as document management systems, information retrieval engines, relational and object databases, groupware and workflow systems, push technologies and agents, and data mining tools can facilitate KM. However, technology should not be seen as an absolute answer to KM, since it is only a tool.
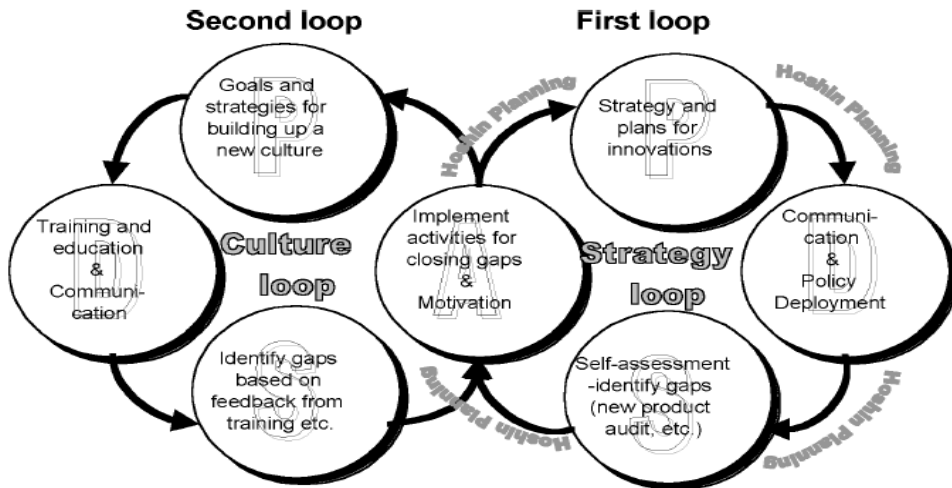
Figure 1 – 'Plan-Do-Study-Act' loop (PDSA) specific to creative and learning organisations
source: Anne Martensen and Jens J. Dahlgaard

### 4. Creative organizations, knowledge management and innovation

The creative and learning organisations have developed the extended PDSA loop (acronym for Plan-Do-Study-Act loop) which is shown in Figure 1. The first loop is for achieving excellence in strategy and planning in innovation management, and the second loop is to improve the whole setting in which innovation takes place, namely the company culture.

If the company does not have the needed supporting culture to carry out the activities connected to strategies and plans, they will seldom be successfully implemented and the second loop must be activated. In the second loop employees are encouraged to have a positive mindset, so that they can be creative and bring up new ideas, and they should have the intention to continuously learn and improve their own skills and abilities. These aspects are covered by the second loop.

Creative organisations come up with new ideas and concepts and use these in a flexible manner in managing innovations, so the organisation continually develops and introduces new products and thereby stays in business.

The concept of creative organisations is based on the people in the organisation. Creative processes build on potential creative resources in the company held by its people. So it is important to focus on the people in the organisation (Figure 2).

People, trained to be creative and to use their imagination, will most often be open to changes and new inputs, be flexible, open-minded and ready to learn new topics, and thereby increase their mental capacity.
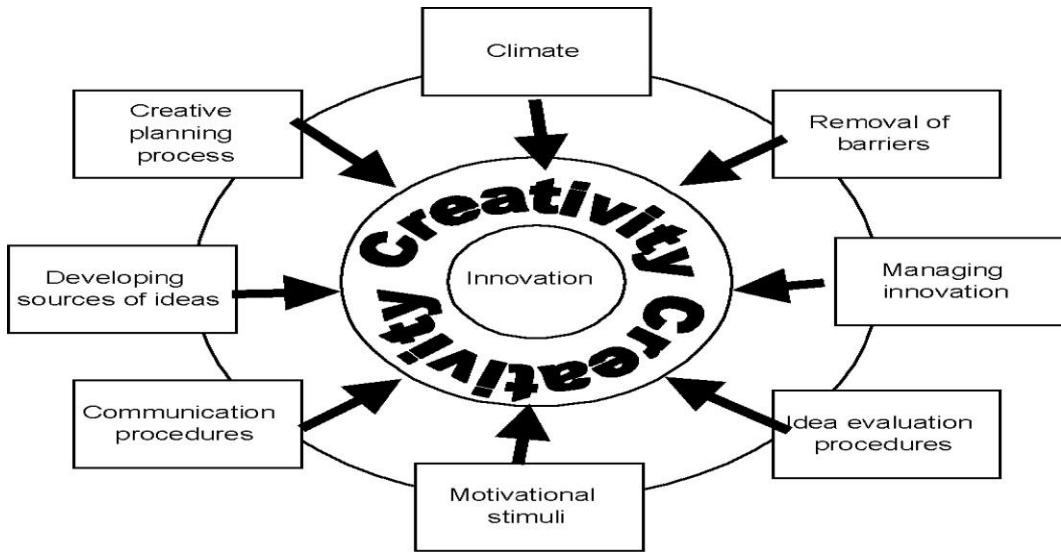
Figure 2 - Majaro's model for creative organizations

If the concept of creative organisations is supplemented with the concept of the learning organisation, this will improve the competitive advantages considerably, because when both concepts are applied at once and in harmony, they will result in a positive synergy effect, which is larger than the contribution from each concept separately. Besides, learning helps to increase the capacity of a persons' creativity. Creativity, on the other hand, is a prerequisite for implementing the learning organisation, and is the underlying driver behind all improvements and innovation.

The concept of learning organisations builds on the TQM (Total Quality Management) concept about everybody's participation. Only if everyone in the organisation is learning will it be possible to achieve a company culture, characterised by learning and dynamic change. So the learning organisation is a company culture supporting the concepts of continuous improvements and everybody's participation.

The learning organisation builds on communication and feedback. This has a positive effect on employees. The learning organisation has the positive effect on employees, that they very often find it obvious what to do, how to do it and why.

Continuous improvements can only be achieved, if the employees understand how to prioritise their efforts. The goals and strategies, developed by top management, will only have an optimal effect, if each employee in his daily work shares and supports these goals and follows the terms of reference for succeeding with these goals. This is done through Hoshin Planning and Process Management (see Figure 1).

Continuous transfer of knowledge and information across functional and divisional boundaries is essential for successful innovation.

Managers have to be visionary and forward looking, to manage the company in a changing world, and this is especially relevant when the focus is on innovation. Knowledge and learning will be the basis for the ability to be forward looking.

Definitions of the term "knowledge" vary considerably, and often such definitions are not clearly explicated in either the research literature or in the operational context. Information can be characterised as "data endowed with relevance and purpose", while knowledge can be defined as "information combined with experience, context, interpretation, and reflection". All organisations deal in knowledge. Organisations can choose between competing systems and processes to acquire, manage, and disseminate knowledge. These systems and processes are explicit as well as implicit and can be influenced by personal and organisational values and ideologies. In terms of an organisation's internal systems, organisations actually filter acquired knowledge.

Research has indicated that organisations do not adopt a uniform approach to knowledge management. They outline two distinct strategies utilised when selecting a KM (Knowledge Management) approach: a codification strategy, centred around IT (Information Technology) resources, and a personalization strategy, centred around human resources (HR). There are rare cases when organisations attempt to adopt elements of both approaches.

Contemporary knowledge management approaches appear to represent extensions of either organisational learning or business information systems, and these KM approaches tend to be driven predominantly within an IT or humanist framework or paradigm. This divide between KM approaches has ramifications for both organisational learning and innovation processes. One body of literature on KM has its origins in approaches to IT, information systems and related issues. This canon supports an IT paradigm. In contrast, a competing body of literature supports a humanist paradigm in which the social relations of organisational knowledge are paramount. While this latter paradigm recognises the technical side of KM, it also highlights the significant influence of people in the process of managing and interpreting knowledge. Compared to the "hard" IT paradigm, the "soft" humanist paradigm accords more attention to organisational slogans, metaphors, and symbols. The analysis of KM in a humanist paradigm is open to more interpretive explanations.

There are numerous definitions of innovation in the literature, however, most definitions share common themes relating to knowledge, which may be turned into new products, processes and services to improve competitive advantage and meet customers' changing needs. The scientists define innovation as "something that is new or improved done by an enterprise to create significantly added value either directly for the enterprise or directly for its customer." Other specialists refer to innovation as "new products or processes that increase value, including anything from patents and newly developed products to creative uses of information and effective human resource management systems".

From the literature, a number of elements of successful KM have been identified. HR can be seen as a strategic lever in creating competitive advantage through the value of the knowledge, skills and training. In order to understand better the nature of innovation, management must ensure that innovation is woven into an organisational culture. Several researchers have emphasised the pivotal role of the management of knowledge, particularly in creating an internal working environment that supports creativity and fosters innovation.

One way to achieve learning is by doing process benchmarking for innovations, which exactly seeks to identify the most effective innovation practices, from many companies that perform similar work functions. The power of process benchmarking lies in its ability to produce bottom-line results.

There are five disciplines that must be present in an organisation that strives to become a learning organisation:

(1) *Mental models.* Break down barriers for learning. This can be achieved by weakening each individual's mental assumptions.

(2) *Shared values.* The efficiency in the learning organisation can be assured by building up shared values, based on each individual's vision.

(3) *Team learning.* Learning must take place in teams, sp that the synergy by learning in groups can be utilised.

(4) *Personal mastery.* The energy and the desire to learn in an organisation must come from the individual's striving for personal goals and visions.

(5) *System thinking.* Everyone must have a comprehensive understanding of the system. People must understand, how they influence and participate in the organisation, and thereby avoid sub-optimisation.

Garvin (1993) has suggested nine mechanisms as important for individual and shared learning. These nine aspects can be viewed as a supplement to the above five disciplines, in that Garvin's nine aspects are defined at an operational level:

1). - training and development of staff;

2). - documentation;

3). - experiment;

4). - display;

5). - monitoring and measurement;

6). - use of different perspectives;

7). - challenge existing practices;

8). - development of a formal learning process based on, a problem-solving cycle;

9). - reflection - learning from the past.

Just as continuous improvement has its basis in the PDSA cycle, so innovation can "be represented as a learning cycle, involving a process of experiments, experience, reflection and consolidation". Managing the process is primarily a function of the creation of conditions under which learning opportunities emerge and are exploited. A key determinant of relative success or failure is the ability to manage this learning cycle in explicit form.

Another way to look at continuous improvements in relation to innovation and learning is by perceiving it as continuous training and education of all employees with regard to the latest methods, techniques and tools within Total Quality Management. Employees have to participate in many different teams, be able to make quick decisions and communicate these decisions to everybody else in the organisation. This requires training and education.

5. The identification of knowledge capital within SMEs

KM practitioners cannot afford to ignore the value that can be gained from HRM. After all, people are the sole originators of knowledge. Traditionally owner/managers of SMEs do not pay a great deal of attention to their own development, in large part because of a perceived lack of time, when other priorities compete for attention. Where the owner/manager is highly entrepreneurial, the focus of business development is often on technical, financial or marketing based initiatives rather than on people development. Often very small firms do not have the luxury of employing a human resources specialist to help with the identification, design and delivery of development opportunities, nor indeed do they think of locating such activities strategically within company plans. Where this does happen, it has been found that the positive attitude of the owner/manager and his/her understanding of business benefits are the key driving forces. Effective recruitment of employees is crucial because it is through this process that knowledge and competences are brought into the organisation. Employees with the required knowledge and desired skills to fill knowledge gaps should be recruited.

Entrepreneurs, demonstrating creative flair and associated characteristics, will be able to translate their drive, motivation and creativity into action. They will bring about change and make things happen for them and their business. The entrepreneurial management is often described as[5]:

- ***opportunistic:*** *continually searching for new opportunities;*
- ***value-driven:*** *based on personal values and drive;*
- ***value adding:*** *seeking to increase the value of organisational resources;*
- ***risk taking:*** *able to accept some risk in introducing changes; and*
- ***creative:*** *able to innovate and take forward ideas into sustainable development.*

In the SME sector in particular the combination of entrepreneurial skill with commercial focus and continued knowledge acquisition and application will be the key drivers of success. Many venture capital companies connected with high-tech start-ups, also make it a prerequisite for the SME to have some demonstrable management team capability in place to take things forward. This is a very good reason for the SME to invest in staff and, in particular, in managerial development. Two levels of development are required, at senior management and the lower employee levels. Both of those levels are extremely important in the growth and development of the SMEs. A range of personnel were found to be responsible for human resource (HR) activities, including the identification of development needs. In

many cases this work is undertaken by senior managers themselves. A pattern of involvement by such parties is common in the SME sector. Employee development is seen as a way to improve and enhance the personal value of individuals. The skills and competences of knowledge workers need to be continuously developed in order for them to produce valuable contributions to a company. If not, as with other tangible assets, their value will depreciate. SMEs have to provide appropriate professional development activities to their employees.

In terms of a toolkit to be developed to help SMEs professionals, their approach to managing their human capital and ensure longer-term growth, a number of areas of content were identified from the research. These include:

- *strategic HR planning including assessment of labour availability;*
- *professional recruitment and selection;*
- *training needs analysis of new and existing personnel;*
- *performance appraisal;*
- *pay and reward strategies;*
- *career planning and development;*
- *HR policies and procedures; and*
- *employment legislation.*

It would also be possible to cover some of these areas through placing a particular HR focus on soft skills development included in any senior management development programme to be run by the university.

1. Conclusions

The management leadership and support are perceived to be the most critical factor, whereas measurement was the least. The critical factors of success in KM as well are useful for both managers and researchers. Since SMEs may not be able to manage all aspects of KM at the same time, an ordered list of the factors of success will provide a clue to SMEs to prioritise and adjust their KM practices.

Concerning the human capital and KM, the companies are considering how to grow their managerial talent at both the top of the organisation and at the next level down. A number of factors such as lack of resources, availability of personnel for release to undertake development programmes and types of development opportunities available were hindering their progress. Their small size and lack of specialist in HRM expertise, in terms of strategic HR planning, talent identification and utilisation in terms of career development, are very obvious.

References

[1] Choueke Richard; Armstrong Roger - "The learning organization in small and medium-sized enterprises -A destination or a journey?", *International Journal of Entrepreneurial Behaviour & Research,* Vol. 4 N0. 2, 1998, pp. 129-140.

[2] Burgoyne, J.; - "Feeding minds to grow the business", *People Management,* 21

September, Vol. 1 N0. 19, 1995, pp. 22-6.

[3] Sanz-Velasco Stefan - "Opportunity development as a learning process for entrepreneurs", *International Journal of Entrepreneurial Behaviour & Research,* Vol. 12 No. 5, 2006, pp. 251-271.

[4] Wong Kuan Yew; Aspinwall Elaine - "An empirical study of the important factors for knowledge-management adoption in the SME sector", *Journal of Knowledge Management,* Vol. 9 No. 3, 2005, pp. 64-82.

[5] Keogh William; Mulvie Angela; Cooper Sarah - "The identification and application of knowledge capital within small firms", *Journal of Small Business and Enterprise Development,* Vol. 12 No. 1, 2005, pp. 76-91.

[6] Wong Kuan Yew - "Critical success factors for implementing knowledge management in small and medium enterprises", Industrial Management & Data Systems, Vol. 105 No. 3, 2005, pp. 261-279.

[7] Dalotă Marius-Dan; Tănăsoaica Laura - "Implications of resource planning, innovation and learning for work processes and performance management", *Romanian Economic and Business Review,* Vol.5, no.1, 2010, pp. 132-138.

[8] Martensen Anne; Jens J. Dahlgaard - "*Strategy and planning for innovation management -supported by creative and learning organizations*", International Journal of Quality & Reliability Management, Vol. 16 No. 9, 1999, pp. 878-891

[9] McAdam Rodney; Alan Galloway - "**Enterprise resource planning and organisational innovation: a management perspective*",* Industrial Management & Data Systems Vol. 105 No. 3, 2005, pp. 280-290

[10] Garvin, D. - *"The learning organisation",* Harvard Business Review, July-August, 1993, pp. 78-91

[11] Majaro, S. - *"Managing Ideas for Profit: the Creative Gap"*, McGraw-Hill, London, 1992