Using Strategic Learning for Achieving Growth in SMEs

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Abstract

It is important that small and medium sized companies (SMEs) survive/remain successful and achieve grow but they should find new, innovative ways of doing business to allow them to access new markets. Often they have limited resources, managers do not have time to learn new skills but the industry in which they operate has moved on. The use of new technologies for business and learning requires costs and other resources which are often missing.

This paper will examine the use of E-learning and social approaches to learning such as Communities of Practice, Social media and mentoring in managerial learning at a strategic level. Finally some examples of on-going developments in European projects that the authors have worked on are given.

Keywords

Small and Medium-sized Enterprises (SMEs); E-Learning; CoP; Mentoring

Introduction

SMEs represent about 99% of the European companies and the number has dramatically increased as a result of the expansion of EU. It is important to remain successful, and SMEs should find new, innovative ways of doing business to allow them to access new markets. It is essential that they cut costs by streamlining operations to allow them operate on a global scale (ECORYS 2012). A crucial success factor for them is to fill existing knowledge gaps and expand the competences of their human resources. It is even more important for SMEs to do this than larger companies, as larger companies have more staff and as a result a bigger pool of skills, which can be difficult to compete with. Within an SME, managers are expected to take on several roles, thus training is even more

significant for them.

However, results of studies show that less than 25% of SMEs staff participates in vocational training courses and less than 60% of employers provide any type of training for their staff (www.oecd-library.org).

It is assumed that managers of SMEs immediately recognise the problem of addressing continuous training needs of their staff and the potential role of e-Learning and other forms like social and mobile learning in meeting these needs (Ileana Hamburg et al. 2013). However, managers in SMEs are often concerned with the daily running of the business and survival rather than the strategic needs of the company.

Strategic knowledge is key to growth and thus sustaining the competitive advantage of an organisation. Strategic knowledge is the 'know how' management use when making key decisions about a company's future direction. Strategic knowledge has to be specific and to the point and may come from a wide range of external sources as often a company's future depends on the market they operate in and events that take place within the industry. These events are often hinging on external parties such as competitors, politicians, customers, suppliers and occurrences beyond the companies control such as natural disasters, economic stability and political and human issues. In 2004, George Grunewald stated that strategic knowledge is a fusion of problem orientated and action guided knowledge in which societal learning is a pre requisite. However, managers do not have the luxury of taking time out to learn new skills and often if they do not take this time, the skills will be obsolete and the industry in which they operate has moved on.

There are several tools for strategic planning, namely

PEST analysis, SWOT analysis, porter's value chain and other such tools (Phillip Kotler 1998; Michael Porter 1985). However, these tools do not allow managers acquire the learning that they need at a strategic level to make the correct decisions. Also these approaches do not enable managers to remain up to date of events that may impact on the industry in which they operate on that often occur on a regular basis. (George von Krogh et al. 2001). In 2002, John Boudreaux emphasised the importance of the knowledge about the network in acquiring strategic learning and the need for managers to learn from the best and also from their own past experiences and errors (Retha Snyman et al. 2004)

This paper will examine the use of e-learning and social approaches to learning such as Communities of Practice, Social media and mentoring in managerial learning at a strategic level. These approaches allow managers to develop up to date skills and external knowledge from other experts in small chunked pieces. Finally, we will give some examples of on-going developments in European projects that the authors have worked on.

Acquiring Strategic Skills in SMEs

It is estimated that managers spend 25% of their time seeking knowledge. When managers are required to make decisions quickly, time constraints are a major issue and often skills and knowledge need to be acquired immediately. Strategic knowledge comes from a wide range of internal and external sources and must be specific and to the point. Retha Snyman et al. (2004) emphasised that for companies to succeed at a strategic level they need to become learning organisations and compete using learning strategies. He specified that companies need to "learn faster than the competition rather than to outwit them."

Juan Bou Llusar et al. (2006) highlighted that in order for strategic knowledge and learning to become a competitive advantage, it must be difficult to imitate, substitute, cannot be mobile and have durability. Thus it must be tacit, complex, specific and systemic. However these conditions are not favourable to disseminating within the organisation. He emphasised the need to increase communication processes in order to reduce these barriers. Social learning is a prime method of sharing tacit knowledge and facilitating social learning. In addition, Manyola Kavakli (2003) investigated the use of chunking in strategic knowledge and found that experts processed information in smaller pieces.

Thus, the social learning in small pieces is key to develop strategic learning in managers. The next section will investigate the use of e-learning, social learning and social media in SMEs in this context.

E-Learning, Social Media and Social Learning in SMEs

Changing economic environments continue to pose severe challenges to SMEs. More and more they need to have sustainable, innovative business strategies supported by flexible learning approaches and new technologies in place. But acceptance and ability to implement this are still very much absent in wide circles of SME management.

E-Learning through its flexibility and ease of access is seen as an enabler of lifelong learning with its potential to transform how and when employees learn, and as a catalyst of change and integration. E-Learning supports very well flexible and informal types of learning, which are typically preferred by SMEs. However, training and development/using new forms of e-learning are still largely regarded as an expense rather than an investment by SMEs managers. Some barriers to training and e-Learning have been identified:

- Lack of deep analysis to identify skill shortage and learning needs of staff to achieve business objectives;
- Existing learning culture;
- Lack of manager knowledge of the effectiveness of new forms of learning;
- Insufficient financial possibilities to develop/train for new forms of learning and technologies;
- Lack of attractive training offers supporting specific business needs;
- Lack of knowledge or understanding of policies of communication and cooperation in research and production;
- Inefficient use of new methods and technologies for sharing and creating knowledge and for development (updating) of innovative skills.

New opportunities for SMEs are opened up by the concept of Web 2.0 (Tim O'Reilly 2005), which facilitates a new level of interaction, information sharing and collaboration. The use of social media, such as blogging, social networks, web services, and new generation e-Learning related to these, further im-

proves the ability of learners to socially interact with the technology used (communication with technology) and learning through its use.

Social media supports social learning; it allows employees to learn by connecting with each other in a wider circle than would be possible without technology. Social learning (Albert Bandura 1977) means learning by observing, conversing, asking in formal and informal forms. It facilitates collaboration, and community-building within and across organizations. These conditions make it favourable to acquire strategic knowledge.

Social media based on Web 2.0 and 3.0 (Ileana Hamburg and Emma O'Brien 2013) offer the premises for a fast acquisition of external knowledge and support and facilitate social learning within the communities. The technical skills needed to use social media are rather low.

TABLE 1 SOCIAL LEARNING SOURCE: (CLAUDIA DE WITT, IAT)

	Social learning
Characteristics	Participation; collaboration; user-generated content
Didactic potentials	Learning in social networks and communities; informal learning; collaborative learning
Limitations	Traditional corporate cultures
Applications	Micro-blogging; social networking; social tagging; wikis
Technologies	Community platforms; micro-blogging tools

Communities of Practice (CoPs)

CoPs have a long history but recently formalized methods guide the activities of these groups. CoPs have benefits for the companies helping them be able to effectively and efficiently complete their daily tasks, because employees often seek knowledge and advice from individuals or teams who have rather than spending a lot of time searching for this information in explicit form.

A growing number of associations are seeking such ways to focus on learning through reflection on practice and knowledge achieving because they need to offer high-value learning activities, but SMEs still hesitate to use CoPs.

For example, CoPs have been widely used in management education to combine academic theory with

workplace learning. (Catherine Monaghan 2011) In addition CoPs have been successful used in companies such as Unilever to create new skills and knowledge in emerging areas within organisations with the main objective to "strike the balance between existing and new knowledge" (George von Krogh et al. 2001). Unilever use CoPs on four different levels; to leverage existing knowledge, expand on this, acquire new external knowledge and evaluate its applicability to the company.

Furthermore interesting research has been carried out in the field of organisational learning, in attempts to explain how personal knowledge and skills become shared in communities of practice or organisations, and how new knowledge is developed (Georg von Krogh et al. 2001)

Thus, CoPs can be successfully used to acquire up to date external knowledge from outside expertise. In addition, with the widespread adoption of internet and building of on-line communities, multiple individuals across several time zones can benefit as well allowing SMEs to acquire expertise on a global scale.

Two characteristics of on-line COPs are the following (Brandon Dean, 2011):

- Group members can access the information wherever, whenever;
- Exchanges can be captured and reused.

Online CoPs allow more than just chat and on-line forums. Today collaboration applications provide a variety of tools that enable management and tagging of documents, building of individual profiles, and online ratings along with discussion boards and chat functionality.

Some features of CoPs can be classified as following (http://www.academia.edu/4499121/201105Creating_S uccessful_Online_Communities_of_Practice):

- Networking;
- Seeking advice and requesting information;
- Seeking expert advice;
- Creating knowledge repositories by capturing tacitm knowledge;
- Problem-solving.

Some advantages of on-line CoPs are the following:

• Saves time: The information is structured and

tagged in such a way as to allow members to quickly search documents, links, and posts to answer their questions;

- Reduces rework: By sharing knowledge in a public setting, content is reused without having to be recreated;
- Due to the use of flexitime or telecommuting, members can experience the benefits of their CoP whenever the need arises, regardless of the day or night;
- Shortens learning curve for new employees: When an organization takes the time to collect resources in a single location, new employee induction time is reduced;
- Motivates members.

Experience with some CoPs shows some critical start points:

- To have an engaging business objective so that the CoP has something concrete and is strategically focused;
- To be clear about the nature: spontaneous or an organized CoP;
- Carefully select CoP leaders, facilitators, champions;
- Top management support.

(www.linkedin.com/pub/fred-nicklas/0/357/199).

It is important that potential participants are confident of using/participating in CoP. Therefore social training should be done by using a social platform, use learning by doing, by collaborating with other trainees.

Cloud

Cloud computing describes computing concepts that involves a large number of computers connected through a network (Wikipedia). Some characteristics are:

- Centralized application hosting or distribution
- Security and confidentiality
- Interoperability

1) Private Cloud

- Private cloud is cloud infrastructure operated solely for a single organization;
- It is managed internally or by a third-party and hosted internally or externally;

 Private clouds have attracted criticism because users "still have to buy, build and manage them";

2) Public Cloud

- A cloud is called a 'Public cloud' when the services are rendered over a network;
- That is open for public use;
- Technically little or no difference between public and private cloud architecture, but security consideration may be substantially different;
- The users do not have to manage the cloud service.

3) Hybrid Cloud

- The hybrid cloud is a composition of a public and private cloud;
- Sensitive applications are handled in an internal private cloud while others are practiced;
- In a public cloud;
- A primary advantage of a hybrid cloud model is that an organization only pays;
- For extra compute resources when they are needed.

The Cloud services can be divided into the three specific levels of IT services offered to the users:

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS)
- Software as a Service (SaaS)

By using cloud computing in training, powerful software and massive computing resources can be used where and when they are needed.

Large companies are streamlining their services to exploit the full potential of the cloud. SMEs have to learn more about the cloud and should be encouraged to use cloud services.

But before transforming a Learning system to the cloud, the required services should be determined and a service catalogue (list of services you will provide to learners) should be developed. In addition the parameters needed from service provider should be identified. Recent research papers categorize the cloud services as following (Abu El-Ala et al. 2012):

- IT Services;
- User Services.

Mentoring

In addition, the use of technology, mentoring can facilitate mentoring of managers in strategic skills. Mentoring is a human research development approach and a vital aspect of knowledge management which needs to be looked by all organisations wishing to improve their performance (Kathy Kram 1985). An existing member of staff or an external collaborator guides less-experienced people in a task to develop professional skills, attitudes and competencies. Also, people with special needs can be helped by mentoring to integrate into work life. Recently, mentoring has been proven as an efficient way to develop more productive workers and so the approach has been adopted by many organizations.

Mentoring can be implemented formally and informally. Informal mentoring is created by a special interest in the mentee by the mentor, for example, when the mentee has been identified as potential employee. This form of mentoring is particularly suitable for people with special needs.

Formal mentoring is supported by the organization in a system of mentoring, from which more participants can benefit. Formal mentoring programs as a well-established way to retain and transfer knowledge (http://www.knowledge-management-tools.net/mentoring.html). Companies should therefore consider implementing formal mentoring relationships and mentor training as an investment in the future knowledge stock of the organization.

The goal of mentoring staff from SMEs is to improve job performance by increasing employees' capability to manage their own performance, emphasizing trust, experience, and supervision, to facilitate performance in the organization, to support retention and leadership development.

According to organizations practicing mentoring, social media are useful for communication with mentors. Social media web-platforms support social learning; forums, blogs, virtual market places, extend traditional face-to-face mentoring by allowing mentoring to take place over distance and in different time periods. This approach supports also formal mentoring processes, which are more accepted by organizations, because they see direct benefits and more mentees are mentored simultaneously.

In addition to a corresponding vocational qualification and field experience, the mentor should have special competences. Mentors need to be social competent, strongly focused, principled and able to develop empathy from the perspective of others. Social competences are of key importance for mentors (particularly showing interest, motivation, and awareness, verbal and non-verbal communication, aptitude, and empathy and engagement skills). The mentor should be able to solve conflicts.

Mentors need skills that enable people to communicate verbally effectively with one and another. Basic to all communication is active listening and overcoming barriers to communication. The mentor and the mentee give feedback regarding his/her work and effectiveness. A mentor should encourage reflective practice to enable the mentee to learn from his/her own experience

Any mentor must also have professional competencies. A mentor should understand the principles of equal opportunity and demonstrate best practice. Mentors must also be able to develop own and the mentee's knowledge and practice across professional and organizational boundaries. In Europe and elsewhere, due to internationalization, intercultural competence in social and employment settings has become more and more essential. Intercultural competences of mentors could be used for organizing learning sequences within cultural events with the active participation of people particularly with learning and communication difficulties.

Case Studies

One of the European projects was NetKnowing 2.0 aimed at improving learning in SMEs through cooperation and networking. Within this project a CoP has been developed, supported by a social platform. (http://cop.netknowing.eu). TikiWiki CMS Groupware has been used which supports Web 2.0 and social media applications. The decision to use TikiWiki was taken after an analysis of some open source tools.

By using the social platform, the CoP users can get information about the project about web 2.0, social and informal learning. If they register in the CoP, they can use Community services like Discussion forum, File Gallery and particularly the Community Directory with addresses, competences and interests of community members. Within the project NetKnowing 2.0 discussions have been organised including SME managers to discuss advantages of a mentoring program and ways to organise mentoring processes. One possible approach is that experienced at the Virtual Academy Brandenburg. The coaches and mentors are

external people who support the sustainable development and advancement of strategic competences of SMEs through informal and organizational learning. Potential learning consultants can be trained to act as mentors. Other companies involved decided to use a mentor from the company for a mentee with disabilities who will work for the company.

Mentoring can be a solution for skill shortages in some sectors such as care health sector. DIMENSAAI (Diversity and Mentoring Approaches supporting Active Ageing and Integration - www.dimensaai.eu) is a European Ldv innovation transfer project coordinated by one of the authors. The consortium intends to improve participation in training and employment, particularly for disadvantaged groups, by using a social innovative process which includes mentoring that focuses on social networking and health and care sector workplaces (Ileana Hamburg 2013). Focus Group Discussions with educators, social actors, employers of care and health sector SME and target group representatives (one group consisted of people with disabilities) were organised in all partner countries to discuss the target groups' needs for work integration and how a mentoring process could support these processes. Formal mentoring was chosen from the results of the focus groups. Formal mentoring sessions are held once a week for new comers includeing people with disabilities, seniors, migrants.

Conclusions

In today's business world SMEs are competing with a larger number of companies, many of these are multinationals that have a greater number of staff and a wider pool of skills. It is important for them to acquire the relevant strategic skills as quickly as possible to remain ahead of the competition. To do this while trying to sustain an organisation can be difficult as a lot of SME manager's time is spent on ensuring the company's survival. By allowing SMEs to leverage off external expertise through the use of CoPs, Social learning and e-learning through the latest technologies such as Social media and cloud computing they can access new skills in a timely manner. Social media can allow managers to access real time information in a chunked manner as needed, cloud computing can allow them to access the material anytime, anywhere and social learning through online CoPs can enable management to gain expertise and advise from knowledgeable mentors which are unavailable to them internally.

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REFERENCES

- Abu El-Ala, S.N. et al. "Cloud Computing for Solving E-Learning Problems". In: IJACSA Vol 3 No 12 2012 International Journal of Advanced Computer Science and Applications, 2012.
- Bandura, Albert. "Social Learning Theory". In: General Learning Press, 1977.
- Boudreau, John. "Strategic Knowledge Measurement and Management". In: CAHRS Working Paper Series, Cornell University, 2002.
- Bou-Llusar, Juan et al. "Strategic knowledge transfer and its implications for competitive advantage: an integrative conceptual framework". In: Journal of Knowledge Management Vol. 10 no. 4, 2006.
- De Witt, Claudia, and Sonia Gangus. "Kommunikation in Serious Games". In: Metz, M. and Theis, F. (eds): Digitale Lernwelt – serious games. Einsatz in der beruflichen Weiterbildung. Bielefeld, 2011: 97-108.
- Dean, Brandon. "http://www.academia.edu/4499121/201105 Creating_Successful_Online_Communities_of_Practice". In: Creating Successful Online Communities of Practice, The Educe Group, 2011.
- ECORYS. "EU SMEs in 2012: at the crossroads". In: Annual report on small and medium-sized enterprises in the EU, 2011/12.europa.eu/enterprise/policies/sme/.../2012/annual -report_en.pdf. Rotterdam, 2012.
- Grunwald, George. "Strategic knowledge for sustainable development: the need for reflexivity and learning at the interface between science and society". In: International Journal of Foresight and Innovation Policy". Vol 1 No 1/2, 2004.
- Hamburg, Ileana. "Knowledge transfer through diversity coach and mentoring partnership". In: Howlett, Robert J., Gabrys, Bogdan, Musial-Gabrys, Katarzyna and Roach, Jim (eds.): "Innovation through knowledge transfer 2012". Heidelberg: Springer, 2012: 107-119.
- Hamburg, Ileana, and Marius Marian. "Supporting knowledge transfer and mentoring in companies by e-learning

- and cloud computing". In: Chiu, D., Popescu, E. and Li, Qing (eds.): ICWL 2012: the 11th International Conference on Web-based Learning; 02.-04.09.2012, Sinaia, Romania; local workshop proceedings. Craiova: Univ. of Craiova, 2012: 91-101.
- Hamburg, Ileana, and Emma O'Brien. "E-learning 2.0, social media and communities to improve knowledge in companies". In: Service science and management research 2, issue 3, 2013: 33-38.
- Hamburg, Ileana et al. "Engaging SMEs in cooperation and new forms of learning". In: Computer and information science 7, 2013.
- Hamburg, Ileana. "Facilitating learning and knowledge transfer through mentoring". In: CSDU 2013: 5th International Conference on Computer Supported Education; Aachen, Germany, 6-8 May, 2013. Lissabon: Science and Technology Publications, 2013: 4.
- Hamburg, Ileana. "Supporting mentoring on the job through social media". In: Encarnacao, Pedro et al. (eds.): Assistive technology: from research to practice; proceedings of the 12th biennial European conference of the Association for the Advancement of Assistive Technology in Europe AAATE 2013. Amsterdam: IOS Press, 2013: 1179-1184.
- Hamburg, Ileana and Hall, Timothy, "Social Networks, Web and Mentoring Approaches in SME Continuing Vocational Education and Training". In: Journal of Information Technology and Application in Education (JITAE). 2013.
- Kavakli, Manyola et al. "Difference between expert and novice designers: an experimental study". In: Lindemann, U. et al. (eds.), Human Behaviour in Design, 2003.
- Kotler, Phillip. "Marketing Management Analysis, Planning, Implementation, and Control". In: 9th Edition, Englewood Cliffs: Prentice-Hall, 1998.
- Kram, Kathy. "Mentoring at work. Developmental relationships in organizational life". In: Scott, Foresman and Company, Glenview, ISBN 0-673-15617-6, 1985
- Monaghan, Catherine. "Communities of Practice: A learning

- strategy for management education". In: Journal of Management Education, 2011: 35-428.
- O'Reilly, Tim. "What is Web 2.0. Design patterns and Business models for the next generation of Software". Obtained through the Internet: http://www.oreillynet.com/lp/a/6228 [accessed Nov. 2008], 2005.
- O'Brien, Emma et al. "Knowledge management for process, organizational and marketing innovation: tools and methods". Hershey, 2011.
- Porter, Michael. "Competitive Advantage". In: New York, Free Press, 1985.
- Snyman, Retha et al. "The interdependency between strategic management and strategic knowledge management". In: The Journal of Knowledge Management Vol 8, No. 1, 2004.
- von Krogh, Georg et al. "Making the Most of Your Company's Knowledge: A Strategic Framework". In: Long Range Planning 34, 2001: 421-439.
- Wenger, Ettiene. "Communities of Practice: Learning, Meaning and Identity". In: Cambridge MA: Cambridge University Press, 1998.
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