

Communities Of Practice: The Source Of Competitive Advantage In Organisations

Jennifer Anne Jerome Anthony, Siti Norazwa bt Rosman, Uchenna Cyril Eze, Gerald Goh Guan Gan, Multimedia University, Melaka, Malaysia

ABSTRACT:

Communities of Practice (CoPs) have become increasingly influential in recent times in both academia and praxis. According to Roberts (2006) CoPs have emerged as a key domain in the realm of knowledge creation more so as knowledge is increasingly being highlighted in the literature as the key and main source of competitive advantage for organisations (Garavan & Carbery 2007). Grant (1996) suggests that knowledge can be integrated externally through relational networks that span organisational boundaries. These networks provide effective mechanisms for accessing and integrating new knowledge, however they may not do so quickly enough to stay abreast with competitive changes. There is no standard definition for CoPs but the widely accepted definition is by Wenger et al. (2002), who opines that it ‘... is a group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting regularly’. The group acts as a forum for practitioners to share what they know, to learn from one another regarding some aspects of their work and to provide a social context for their work. CoPs have become an important method of knowledge management in order to support promote the advancement of an organisation’s intellectual capital by enhancing knowledge exchange and promoting continuous organizational learning (Mittendorff et al. 2006). This paper illustrates that core competences do not reside in the abstractions of management theories; instead it resides and grows in communities of practice. This paper also discusses the relevance of this concept to strategic knowledge management. Specifically, this paper will explore the value and effects of CoPs in organizations.

Keywords: *Communities of Practice, Knowledge management, Organizational learning*

1. Introduction

Communities of practice (CoPs) have become increasingly influential within the management literature and praxis. According to Roberts (2006), CoPs have emerged as a potential theory of knowledge creation in recent years. Knowledge is increasingly highlighted in the business strategy literature as a source of competitive advantage (Garavan & Carbery 2007). Grant (1996) suggests that knowledge can be integrated externally through relational networks that span organisational boundaries. These networks provide effective mechanisms for accessing and integrating new knowledge, however they may not do so quickly enough to keep up with competitive changes

(Garavan & Carbery 2007). The purpose of this paper is to argue that core competences do not reside in the abstractions of management theories. It instead resides and grows in communities of practice. It is also to determine whether the concept of communities of practice is relevant to strategic knowledge management. In particular, the scope of this paper will be confined to how CoPs affect communities of professionals and the organization as a whole. A discussion on role of CoPs in communities and organization will therefore be presented, followed by a review of several CoP implementation issues. Finally, it provides some insights on the importance of CoPs as a knowledge management strategy.

2. Communities of Practice

There is no standard definition for CoPs and many attempts have been made to define communities of practice. Among all, the most widely accepted definition is by Wenger et al. (2002) who define 'CoPs as a group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting regularly'. The term provides a sociological basis for understanding the discipline, structure and formation of CoPs. Individuals form connections with their working community which helps them make sense of their experiences and give meaning to what they observe and how they participate in their communities (Loyarte & Rivera 2007). Loyarte and Rivera (2007) explain that CoPs are formed to share what they know, to learn from one another regarding some aspects of their work and to provide a social context for that work. However, CoPs are not just a gathering and recognition of common interest within the organisation. Instead, CoPs focus on the practical aspects of a practice, everyday problems, new tools, and developments in the field, things that work and do not. Individuals will be attracted to participate in CoPs as the it provides value to them at both the individual and group levels (Loyarte & Rivera 2007).

CoPs have become a tool for knowledge management to support or stimulate learning in the organization by enhancing knowledge exchange and organizational learning (Mittendorff et al. 2006). Wenger (1998) argues that, despite the variety of forms that CoPs take, they all share a basic structure. A CoP can be viewed as a unique combination of three fundamental elements: a domain of knowledge, which defines a set of issues, creates a common ground and a sense of common identity; a community of people who foster interactions and relationships based on mutual respect and trust, and who care about this domain; and a shared practice they are developing with a set of frameworks, ideas, tools, information, styles, language, stories, and documents that community members share, and with that they can be effective in their domain (Mittendorff et al. 2006). A CoP focuses on a specific domain and its members develop their practice by communicating the problem and discussing on the possible solutions collectively. According to Wenger et al. (2002), these elements, when functioning together, make a CoP an ideal knowledge structure, a social structure that can assume responsibility for developing and sharing knowledge resulting in the creation of a common pool of knowledge (Mittendorff et al. 2006). It is this learning mechanism that is known to contribute to the need of collaborative activities in the community.

CoPs are ideal vehicles for leveraging tacit knowledge because they enable person to person interaction whilst engaging a whole group in advancing their field of practice. As a result, they can spread insights from that collaborative thinking across the whole organization. Digenti (1999) suggests that in order to embed collaborative learning within the CoP, a discussion of attitude towards collaboration should be facilitated. Tacit knowledge regarding collaboration should be uncovered and the lack of alignment around collaborative goals should also be highlighted (Digenti 1999). In order to develop a collaborative climate, activities such as information dissemination, the adoption of collaborative leadership style and the design of collaborative team routines must be included. According to Senge (1990), the creation of collaborative space is important to allow CoP members to propose and develop their representations and models of their ideas. The voicing of individual insights, energy and involvement in CoPs in addition to the shedding of previously held assumptions to shape new directions should be encouraged (Garavan & Carbery 2007). Communication, trust and participation are very critical building blocks required to develop collaboration activities in order to create effective CoPs. Wenger (1998) suggests three dimensions in communicating among community members.

The three dimensions that he suggested are:

1. Members should engage in interaction with each other and establish norms and relationship based on mutual engagement.
2. Members are bound together by a sense of joint enterprise.
3. Members produce a shared repertoire of communal resources over time.

The flow of information and knowledge creation lies on the interaction among community members. Nonaka and Takeuchi (1995) emphasize that the key to knowledge creation is the mobilization of tacit knowledge. This process takes place within an expanding “community of interaction”, and through four modes of knowledge conversion represented in their SECI model which are:

- i. from tacit knowledge to tacit knowledge: process of ‘socialization’ through shared experience an interaction;
- ii. from explicit knowledge to explicit knowledge: process of ‘combination’ through reconfiguring existing knowledge such as sorting, adding re-categorizing and re-contextualizing explicit knowledge can lead to new knowledge;
- iii. from tacit knowledge to explicit knowledge: process of ‘externalization’ using metaphors and figurative language;
- iv. from explicit to tacit knowledge: process of ‘internalization’ through the learning process.

These four processes outlined by Nonaka and Takeuchi (1995) illustrate how knowledge is being transferred, communicated, created and captured in organisations

(Mittendorff et al. 2006). However the willingness to communicate and share the knowledge among community members is very important in order for these processes to take place. If individuals are not willing to share, it hinders the total development of CoPs. Roberts (2000) suggests that trust is a necessary precondition for sharing and mutual understanding that is a key facilitator necessary for the effective transfer of knowledge. This is because high levels of trust lead to greater openness between CoP members.

Therefore, potential management styles that undermine the basis of building trust must be avoided as it impedes upon effective knowledge sharing and creation in organisations (Garavan & Carbery 2007). Regularly helping each other makes it easier for community members to admit their weak spots and learn together in the "public space" of the community. Having frank and supportive discussions of real problems frequently builds a greater sense of connection and trust between community members (Garavan & Carbery 2007). As they share ideas and experiences, community members often develop a shared way of doing things, a set of common practices, and a greater sense of common purpose (Garavan & Carbery 2007).

The successful functioning of a knowledge sharing community of practice is not possible without the active participation of its members. The community of practice model allows organizations to overcome barriers in sharing information that conventional, technology-based KM system often encounters (Garavan & Carbery 2007). For a community to be truly vibrant there should be an active participation of members in all forms of knowledge sharing activities (Garavan & Carbery 2007).

3. Communities Of Practice And Competitive Advantage

The reason why communities of practice are effective in promoting knowledge creation and sharing in organisations is the fact that most of an organization's competitive advantage is embedded in the intangible, tacit knowledge of its people and that competencies do not exist apart from people who develop them (Dougherty 1995). Not only new knowledge can be created through the sharing in community, skills are also discursively produced and disseminated during the conversation and networking activities (Brown & Duguid 1991; Weick & Westley 1996). Therefore, one of the ways to help people share and internalize tacit knowledge is to allow them to talk about their experiences and to exchange their knowledge while working on specific problems. Through this process, individual CoP member's skills, talents and knowledge will be improved and can be identified. This will enhance the community's effectiveness as they recognize which one among them is an expert in a specific area. The community may save their energy and time since they know the right person to refer to and to seek for advice regarding a specific subject matter or problem. By having different skills, talents and knowledge among community members, the organization may leverage on its human capital which is the source of its organisational capabilities. The CoP may also generate unique ideas for new product and services through the combination of different skills, talents and knowledge that each member possesses (Brown & Duguid 1991; Weick & Westley 1996) .

CoPs also play a critical role in the promotion of learning and innovation in the organization and they can be a very powerful tool to generate sustainable competitive advantages (Swan et al. 2002). Several researchers have observed that CoPs are a strong alternative to build teams, especially in the context of new product development (Ardichvili et al. 2003). The tacit knowledge that resides in each community member accumulated over the years from experience can be filtered, codified and processed to invent new and unique products or services that create and add value to the organization. Because tacit knowledge is difficult to copy or imitate, there is growing agreement that this type of knowledge is a key element in sustaining organizational competitiveness (Liedtka 1999; Davenport & Prusak 1998). By having first mover advantage, it provides greater and wider spaces for a company to gain and own the market. To invent a product which is highly valued and hard to imitate by competitors contribute to the long term above average returns for the organization.

In recent years, CoPs have gained increasing popularity as a way to manage the human and social aspects of knowledge creation and dissemination within organizations, and have also received significant attention in the knowledge management literature (Ardichvili et al. 2003; Wenger et al. 2002; Gourlay 2001; Walsham 2001; Wasko & Faraj 2000; Davenport & Prusak 1998). It is a known fact that all companies seek to possess competitive advantage whether is it in their processes or in their products or services. Innovation depends on how people apply knowledge in ways that produces solutions to old and new problems. Much of what is done by people is explained in CoPs. This is where best practices and innovations emerge and solutions to shared problems are identified. Many companies are determined to grow and be productive but CoPs do not guarantee immediate results. Instead, CoPs are an investment in an organization's future, it is not a quick fix to be applied for the sake of short term gains. Therefore, it is anticipated that many CoPs will emerge and contribute to the organisation's growth in the long term despite being sidelined. CoPs can be therefore seen as a small investment in the present in return for a huge benefit in the future.

The success of CoPs does not only depend on the organisation's strategy, but also on the motivation and willingness of employees to participate in and to contribute to these communities (Pastoors, 2007). There is a growing consensus that the best way to improve organizational learning is not to (simply) focus on capturing, codifying and documenting knowledge of individuals, but rather to concentrate on ways, through which knowledge can be shared, discussed and applied in innovations (Mittendorff et al. 2006). One of the best-known examples of a CoP was formed by the copy machine repair technicians at Xerox Corporation. Through networking and sharing of their experiences, particularly the problems they encountered and the solutions they devised, a core group of these technicians proved extremely effective in improving the efficiency and effectiveness of efforts to diagnose and repair Xerox customers' copy machines (Nickols 2000). The impact of this CoP on customer satisfaction and to the business value to Xerox was invaluable. Yet, for the most part, this was a voluntary, informal gathering and sharing of expertise, not a "corporate program" (Nickols, 2000).

Schenkel and Teigland (2008) explain that individuals mutually engage with others participating in the same practice, learning to conduct their work-related tasks, thereby

improving their ability to perform their work-related tasks, with the outcome being improved performance for the individuals, the community of practice, and the organization. CoP efforts will positively affect behavior in the workplace and ultimately drive enhancements in firm performance (Davenport & Prusak 1998; Wenger et al. 2002).

The performance of CoPs is dependent on the ability of community members to continuously build and access the community memory through frequent informal interactions, facilitating the effective creation and transfer of valuable tacit and implicit knowledge within the community (Lave & Wenger 1991). Therefore, when faced with a problem at work, members of the community are able to rely on the community's memory. According to CoP theory, when the ability to communicate closely among CoP members is hindered, the community of practice may collapse and break down into loose groups (Wenger 1998).

Kimble and Hildreth (2005) state that the benefits of CoPs can be introduced as a part of knowledge management (KM) have led to CoPs becoming the object of interest in both academic and commercial arena. The practical CoP configurations implemented by organisations mix organizational measures such as consulting services, workflow management, production and dissemination of case-histories, meetings, with technologies such as portals, knowledge libraries and online forums (Scarso, Bolisani & Salvador 2007).

Ardichvili et al. (2006) suggest that CoPs do not actually respond to the strict control of the traditional managerial style but rather management efforts should be devoted in removing barriers and creating favourable instances for individuals to participate. Too much bureaucracy can be a barrier in spontaneous sharing. The expansion in the size of CoPs which cuts across departments and multinational sites may question the integration of local and centralized management because although a central standardized policy may provide a common understanding within the organisation, it may eventually result in stifling the growth of CoPs as it would be looking at the effectiveness of these communities organisation-wide and slowly losing focus on the specific issues of interest that are more often than not diverse and localised, that are often difficult to appreciate and recognise by non-community members.

4. Virtual Communities Of Practice

CoPs become virtual when the primary mode of interaction uses ICT and where community members do not meet physically for meetings or discussions. Internet technologies are among few viable alternatives to enable live conversations and knowledge exchange required in CoPs. Research shows that there are numerous reasons individuals could have for sharing their knowledge with other members of CoPs online. Research shows that intrinsic motives are more powerful enablers and motivation for sharing knowledge compared to extrinsic stimuli (Ardichvili, Vaughn & Tim 2003). For that reason, employees are actually craving for knowledge and are motivated to search, learn, and gain new knowledge. Extrinsic stimuli such as monetary and administrative are just a bonus motivation for them. While their interactions with fellow colleagues may be limited due to time-space issues, virtual

CoPs (VCoPs) provide them with a solution that is both feasible and economical. With Internet technologies, knowledge from different parts of the world may be retrieved and shared easily among VCoPs (Ardichvili, Vaughn & Tim 2003). It provides a convenient place for the exchange of knowledge. The Internet also provides large knowledge repositories, video conferencing, and online forum as an enabler of VCoP's activities. In order for VCoPs to succeed, there should be an active participation in both the supply and demand of knowledge, willingness to share and gain new knowledge and also the creation of a comfortable environment for members when participating in VCoPs (Ardichvili, Vaughn & Tim 2003).

The concept of virtual CoPs is being applied throughout various organizations by bringing together key players into a collaborative environment to work on joint initiatives to come out with solutions to common problems. All the key personnel in the collaboration are personally invited to participate based on their professional competences and proven ability to work in cross-functional and cross organizational teams (Juriado & Gustafsson 2007). In essence, enabling collaborative capability through virtual CoPs, represents a fundamental transition to more effective organizational work practices. This environment which is supported by the knowledge portal will enable and enhance team collaboration and communication for optimal decision making capabilities. As organizations begin to work and collaborate virtually. The need for collaborative tools enables people to share data, information and knowledge in real time. Technological feasibility, efficiency, immediate access and cost effectiveness are significant business process improvements to effective VCoPs. This in turn provides greater incentive for building virtual collaborative environments. VCoPs help to augment cross-functional knowledge and cross-organizational perspectives to provide more effective concept development. These also increase CoP members' ability to initiate and contribute to project across organizational boundaries.

Wenger et al. (2002) discusses the "downside" of CoPs while Lave and Wenger (1991, p. 58) emphasize on the "contradictory nature of collective social practice" as a dilemma. This is because while the strong sense of belonging to a particular CoP is highly regarded, this however can also lead to sense of bias towards people who are not part of the CoP and its resulting knowledge (Alvesson 2000). Brown and Duguid (2001, p. 203) argue that CoPs can be "warm and cold, sometimes coercive rather than persuasive and occasionally even explosive." However, their advantage lies in the fact that they mediate between individuals and large, and very often formal, organisations and contribute to organisational learning and knowledge creation.

Some issues discussed by Liebowitz and Chen (2003, p. 422) regarding knowledge sharing among government personnel involves the "motivate and reward" system which encourages knowledge sharing but is subject to limited financial awards. Secondly, it is the bureaucratic and rigid nature of government organizations that hamper knowledge sharing activities. Last but not least, it is how people seem to be reluctant in sharing knowledge as they "keep knowledge close to heart as they move through ranks with the knowledge is power paradigm" (Liebowitz & Chen 2003, p. 422).

5. Conclusion

It is wise to state that there is no silver bullet in solving problems that arises in organizations as how similar it is with the application of core competencies. It is agreeable the neither CoPs nor management theories on a stand alone basis could develop an organization that is competitively sustainable but by putting these two elements together would make an organization unbeatable as these elements would bring a lot of value and profit to the organization. CoPs assist organisations to attain an effective level of knowledge management for competitive advantage. This is because knowledge-based strategies must not solely focus on collecting and disseminating information, they should instead focus on creating a mechanism for practitioners to reach out to other practitioners. Hence, managers must develop systems that facilitate exchange of ideas and solutions as well as track members' participation in these communities. CoPs illustrate the broader knowledge management strategic initiatives that attempt to create a collaborative association among employees, encourage willingness to share and exchange knowledge and also defining knowledge networks. By understanding this, the culture of sharing knowledge should be aligned with the communities of practice concept to attain higher levels of performance for the organisation.

6. References

- Alvesson, M. (2000). "Social identity and the problem of loyalty in knowledge-intensive firms", *Journal of Management Studies*, vol. 37, no. 8, pp. 1101-23.
- Ardichvili, A., Maurer, M., Li, W. & Wentling, T. (2006). Cultural influences on knowledge sharing through online communities of practice, *Journal of Knowledge Management*, vol. 10, no. 1 2006, pp. 94-107.
- Ardichvili, A., Page, V. & Wentling, T. (2003). "Motivation and barriers to participation in virtual knowledge-sharing communities of practice", *Journal of Knowledge Management*, vol. 7, no. 1, pp. 64-77.
- Brown, J.S. & Duguid, P. (1991). "Organizational learning and communities of practice: toward a unified view of working, learning and innovation", *Organization Science*, vol. 2, no. 1, pp. 40-57.
- Davenport, T. & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*, Harvard Business School Press, Boston, MA.
- Digenti, D. (1999). "Collaborative learning: a core capability for organizations in the new Economy", *Reflections*, vol. 1, no. 2, pp. 45-57.
- Dougherty, D. (1995), "Managing your core incompetencies for corporate venturing", *Entrepreneurship Theory and Practice*, vol. 19, no. 3, pp. 113-35.
- Garavan T. & Carbery R., (2007). "Managing intentionally created communities of practice for knowledge sourcing across organizational boundaries Insights on the role of the CoP manager Department of Personnel and Employment The Learning Organization", *The International Journal of Knowledge and Organizational Learning Management*, vol. 14, no. 1, pp. 34-39.

- Gourlay, S. (2001), "Knowledge management and HRD", *Human Resource Development International*, vol. 4, no. 1, pp. 27-46.
- Grant, R.M. (1996). 'Towards a knowledge-based theory of the firm', *Strategic Management Journal*, vol. 17, winter, pp. 109-122.
- Juriado R. & Gustafsson N. (2007). "Emergent communities of practice in temporary inter-organisational partnerships", *The Learning Organization: The International Journal of Knowledge and Organizational Learning Management*, vol. 19, no. 3, pp. 374-390.
- Kimble, C. & Hildreth, Paul. (2005). "Dualities, distributed communities of practice and knowledge management", *Journal of Knowledge Management*, vol. 9, no. 4, pp. 102-113.
- Lave, J. & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*, Cambridge University Press, New York, NY.
- Liebowitz, J. (Ed.) (1999). *The Knowledge Management Handbook*, Boca Raton, FL: CRC Press.
- Liedtka, J. (1999). "Linking competitive advantage with communities of practice", *Journal of Management Inquiry*, vol. 8, no. 1, pp. 5-16.
- Loyarte E. & Rivera O. (2007). "Communities of practice: a model for their cultivation". *Journal of Knowledge Management*, vol. 11, no.3, pp 67-77.
- Mittendorff K. et al (2006). "Communities of practice as stimulating forces for collective learning", *Journal of Workplace Learning*, vol. 18, no. 5, pp. 298-312.
- Nickols, F. (2000) *Communities of Practice: Definition, Indicators & Identifying Characteristics*.
- Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company - How Japanese Companies Create the Dynamics of Innovation*, USA: Oxford University Press.
- Pastors, K. (2007). "Consultants love-hate relationship with communities of practice", *The Learning Organization: The International Journal of Knowledge and Organizational Learning Management*, vol. 14, no. 1, pp. 21-33.
- Roberts, J. (2000). 'From know-how to show-how: the role of information and communication technologies in the transfer of knowledge', *Technology Analysis and Strategic Management*, vol. 12, no. 4, pp. 429-43.
- Roberts, J. (2006). 'Limits to communities of practice'. *Journal of Management Studies*, vol. 43, no. 3, pp. 623-639.

Scarso, E., Bolisani, E. & Salvador, L. (2007). "Critical success factors of CoPs: evidence from a global company", paper presented at the 7th European Conference on Knowledge Management, Barcelona, 6-7 September.

Schenkel, A. & Teigland, R. (2008), "Improved organizational performance through communities of practice", *Journal of Knowledge Management*, vol. 12, no. 1, pp. 106-118.

Senge, P.M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*, New York: Doubleday.

Swan, J., Scarbrough, H. & Robertson, M. (2002). "The construction of communities of practice in the management of innovation", *Management Learning*, vol. 33, no. 4, pp. 477-496.

Walsham, G. (2001). "Knowledge management: the benefits and limitations of computer systems", *European Management Journal*, vol. 19, no. 6, pp. 599-608.

Wasko, M. & Faraj, S. (2000). "It is what one does: why people participate and help others in electronic communities of practice", *Journal of Strategic Information Systems*, vol. 9, no. 2/3, pp. 155-73.

Weick, K. E., & Westley, F. (1996). "Organizational learning: Affirming an Oxymoron". In S. R. Clegg, C. Hardy & W. R. Nord (Eds.), *Handbook of Organization Studies*, London: Sage, pp. 440-458.

Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*, Cambridge: Cambridge University Press.

Wenger, E., McDermott, R & Snyder, W. (2002). *Cultivating Communities of Practice: A Guide to Managing Knowledge*, Boston: Harvard Business School Press.

About the Authors:

Jennifer Anne Jerome Anthony and Siti Norazwa bt Rosman received their Bachelor of Business and Knowledge Management (Hons) from the Faculty of Business and Law, Multimedia University, Melaka.

Dr Uchenna Cyril Eze and Gerald Goh Guan Gan are lecturers in knowledge management at the Faculty of Business and Law, Multimedia University, Melaka; Email: uchenna.eze@mmu.edu.my and gogoh@mmu.edu.my respectively.

Contact: Jennifer Anne Jerome Anthony, Siti Norazwa bt Rosman, Uchenna Cyril Eze & Gerald Goh Guan Gan, Knowledge Management Group, Faculty of Business & Law, Multimedia University, 75450 Melaka MALAYSIA
