



**VIRTUAL COMMUNITIES OF PRACTICE:
TOWARDS NEW MODES OF LEARNING AND KNOWLEDGE CREATION ?**

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**Research Note no 2004-05
Of the
Canada Research Chair on the
Socio-Organizational Challenges of the Knowledge Economy**

**Télé-université,
Université du Québec
April 2004**



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Note : this is a slightly longer version of a paper written for the Education, Participation and Globalization conference held in Prague, Czech Republic, May 20-22nd; we wish to thank the Cefrio (www.cefr.io.qc.ca), the research institute that financed the research.



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Abstract: This paper presents some results from an action-research on communities of practice in Québec (Canada), and highlights the main conditions and challenges of such new modes of learning and knowledge creation on the basis of some seven case studies analysed in detail, as well as the results of a questionnaire survey administered to the participants of some 12 communities of practice. Participants' commitment and motivation in the project, dynamism and continuity of leadership, organizational support and recognition of employees' involvement appear to be the key elements.

1. Introduction

In recent decades, there has been an interest in different forms of workplace participation and their impacts on individuals and organizations. A great deal of this interest in teamwork, organizational learning, collaborative work and other forms of collective work comes from the fact that nowadays organizations expect substantial gains from these organizational forms. While in the past, there was more interest in direct productivity gains, today this interest seems to be shifting more and more towards learning, considered to be an indirect source of such gains.

Knowledge management is thus becoming a new mode of training or learning which is perceived in many organizations as a source of gains. The concept of communities of practitioners stems from this tradition, but is presented as a specific form of knowledge development, in principle more centred on the individuals and their exchanges than on "management" by the firm. The interest shown in knowledge development over the past few years undoubtedly accounts for the recent interest in communities of practitioners, in particular given the possibilities for knowledge development that this mode of learning offers to organizations. Thus, following collaborative work and teamwork, the use of communities of practitioners seems to have emerged as a way to develop collective skills and organizational learning.

Organizational learning is part of a broader concern about the development of collective skills. We know that a large proportion of effective relations within organizations are informal, a characteristic that relates to the concerns of the communities of practitioners, which are usually based on informal relations.

Organizational learning goes beyond individual learning, which can lead to relatively permanent changes in the individual's behaviour, because it results in the development of a knowledge basis which could translate into a more significant change of another kind. The knowledge which is examined in this article is disseminated throughout the organization, is transmissible between members, is subject to consensus and is integrated into the work processes and the structures of the organization. From this perspective, organizational learning is closely linked with "meaningful" organizational processes, which are basically routines used by decision-makers to detect certain problems, define priorities, find solutions and attempt to improve performance.



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In this paper, we will first define this new form of learning through communities of practitioners and situate it in the context of previous research on organizational learning. We will then present some of the results, highlight the main sources of satisfaction and dissatisfaction, as well as the conditions of success and challenges that emerge from the case studies.

2. Communities of Practitioners

With this interest in workplace learning, a new concept has emerged, that is, communities of practice or, as some prefer to say, communities of practitioners. The term “communities of practice” was first used by Wenger in 1991 and popularized more widely in two major works (Wenger *et al.* 2002, 2000). The definitions refer to the idea of sharing information and knowledge within a small group, as well as to the value of informal learning for a group and an organization. The following definitions help us to better understand what this concept actually means (Mitchell, 2002):

- CoPs are people who share a concern, a set of problems or a passion about a topic and deepen their knowledge and expertise in this area by interacting on an ongoing basis;

- a group whose members regularly engage in sharing and learning, based on their common interests.

In this article, we will focus on the following factors: the sharing of an interest or a concern, the ongoing interaction between the group’s members, and the sharing of knowledge which leads to learning. Studies also often emphasize learning in the context of work, through exchanges with colleagues and collaboration. Thus, participation in a community is thought to enhance learning.

At first, authors mainly studied informal communities that are created spontaneously in a workplace. However, over the years, there has been increasing interest in the creation of such communities in workplaces, and even in the creation of teleworking communities that use information and communication technologies, as was the case of the Cefrio project in which we participated.

As this article focuses on aspects of communities of practitioners related to learning and collaborative work, which are considered to be a source of training and learning, the presumed advantages of communities from this perspective should be mentioned: retention of knowledge when employees quit, informal diffusion of relevant knowledge, exchange of knowledge between peers and, as a result, improvement of innovation and productivity.

Let us now turn to conditions of success. First, group work always requires a number of conditions and the communities of practitioners (CoPs) are not an exception to this rule. On the contrary, these conditions are certainly even more important in the CoP context, since



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participants must in principle share tacit knowledge, collectively build up knowledge, and solve production or service problems. In this context, the social relations between actors cannot be neglected. Therefore, one of the main conditions mentioned in the literature concerns the commitment of participants to the task or the community, as well as the interest and motivation of individuals to work together as a group. Some authors refer to a “joint enterprise” to describe the mission or common objective that participants give to a CoP. However, few authors have determined how to foster this commitment, which appears to be taken for granted regardless of the context and the social relations of work, whereas in reality this is not the case. Second, many authors emphasize the importance of having a shared set of resources or what could be referred to as “common baggage,” or common language, in order to facilitate exchanges and avoid misunderstandings and conflicts.

In this respect, among the other conditions cited is one that is external to the participants — the importance of the animator or leader of the CoP. Lastly, also underlined are the importance of the support and the resources made available by the employer or the organization responsible for the CoP, the support and legitimacy granted to the CoP by the immediate superior as well as the recognition given, whether financial or in another form. Technology and technical support are sometimes mentioned, but the studies seem to indicate that the challenges lie more in human resources management and organizational issues, although it is obviously not necessary to resort to complex technology if a virtual (or teleworking) CoP is to be created.

3. Communities of Learning? Results from our Research

The results presented in this article are derived from action research on a dozen communities of practitioners (CoPs) conducted under the aegis of the *Centre francophone d'informatisation des organisations* (CEFRIO¹). To date, seven CoPs have actively participated in the research, which was carried out from 2001 to 2003. One hundred and eighty (180) participants answered questionnaires on starting up a CoP and slightly less than 100 participants answered evaluation questionnaires six months later. In addition, focus groups and recordings of critical incidents in each of the communities were also conducted so as to better understand the dynamics of each of the CoPs. We will focus on the aspects related to learning and training, the theme of this conference, paying particular attention to the conditions and challenges that emerge from our results.

4.1. Success and attainment of objectives

Although the objectives of the communities of practitioners studied differed (Jacob et al., 2003), they were mainly aimed at learning through exchange and collaboration. From this perspective, it is interesting to note how the objectives have evolved over time. When the communities were starting up, the objectives identified by the participants were usually

¹ We would like to thank Cefrio for funding this research, which was conducted in partnership with six other colleagues who examined other aspects (communications, technology, etc.- see Jacob *et al.*, 2003). The follow up study of a dozen communities of practitioners in Québec organizations entitled “modes de travail et modes de collaboration à l'ère d'Internet” and other articles on this theme can be found on the following sites: www.cefr.io.qc.ca ; www.teluq.quebec.ca/chaireecosavoir.



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related to exchange and sharing of information and knowledge, better utilization of delocalized resources, as well as the creation of a collective memory -- objectives which actually pertain to knowledge sharing.

It must first be stressed that the majority of respondents to this question have mixed feelings about the success and usefulness of the community, even though they think that it has had a positive impact on the work climate. Thus, although the participants do not appear to be enthusiastic, collaboration within the CoPs seems to be rather positive. (Bourhis and Tremblay, 2004).

However, after a few months of work in a virtual CoP, the achievement of objectives seemed to be uneven. In fact, although certain CoPs felt that they had achieved their objectives, as was the case of a CoP in the health sector (Tremblay, 2004a), this was not so true of other CoPs. Perhaps it was still too soon to assess the achievement of objectives since, unlike project teams or groups, CoPs are not supposed to have a specific schedule and they have to learn new operating modes in a short time.

Concerning the partial achievement of the objectives of CoPs, there are various possible reasons for this, including the frequent change of CoP leader, the loss of interest on the part of management or participants, or the lack of time for participation. However, it must be stressed that developing learning and experimenting with a new problem-solving approach, which were not always among the objectives considered to be the most important at first, seemed to have been relatively well achieved by a number of CoPs and these forms of learning are greatly appreciated by the participants.

It must be stressed that all of the CoPs operated with a knowledge-sharing telesoftware. The participants were either not very familiar with the software or had to more or less master it in a few months, depending on how easy or difficult it was for them to use this software and the time – which is generally limited -- that they had. The use of software such as Knowledge Forum or Lotus Notes, which was different in each case, allowed CoP participants to exchange messages. These were then grouped together on a space and could be reviewed and re-organized according to the themes discussed in the exchanges. In principle, this is how virtual (i.e., teleworking) communities must jointly develop knowledge.

4.2. Sources of satisfaction

In general, participants appreciated the pertinence of the topics addressed in the exchanges in relation to their work, the collaboration between members, the solving of work problems, the establishment of consensus, group work, and the development of new skills. They were slightly more critical of the quality of the exchanges, which was viewed differently by different CoPs. It must, however, be noted that younger participants seemed to appreciate all these aspects more than participants aged 50 or over. More in-depth analysis is needed to determine whether age alone explains this finding or whether other variables might be more important in the explanation.



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Participants were also asked to assess different aspects of their experience. It was clear that the most interesting aspect for participants was learning from other people as well as exchanging and sharing information and knowledge. Nevertheless, it is interesting to note that the majority of participants thought that they had learned more from others than had contributed to the exchanges themselves. It thus seems that there was a deficit in active participation by CoP members, since many of them remained somewhat on the periphery of the community's central core, in what is referred to as "peripheral participation." (more detail in Tremblay, 2004, 2004a).

4.3. Sources of dissatisfaction

The main sources of dissatisfaction identified by the participants relate to the lack of recognition of participation by the employer, sometimes also the lack of peer recognition, and in particular the too often limited time (given the objectives), spent on the community's activities. In fact, the majority of participants were not released from other tasks to participate in the CoP and this activity therefore ate up their working time (Tremblay, 2004). However, the most satisfied CoP in this regard is made up of health professionals, whose CoP was not supported by their employer but by a professional association, and thus the participants used their personal time to participate. Once again, motivation and commitment to the project emerged as the key variables in the success of this CoP. Participants were willing to put personal time in a project because the knowledge acquired and the achievements seemed to be worth their while. In contrast, in other cases, the achievements were apparently too minor or not sufficiently visible or satisfactory. This negative view was confirmed by the fact that the majority did not think that the CoP activity would be recognized in their performance evaluation, career progression, and skills assessment. However, it seemed that participants were generally more optimistic about the recognition of their learning by colleagues, although this did not yield concrete results in career terms.

It must be noted that most of the participants in the CoPs studied did not know each other well beforehand, but were designated to participate in these CoPs. Therefore not all of them were volunteers. Moreover, one CoP in which most participants did not know each other at all was the most successful case, which means that other factors (professional commitment in this case) can compensate for prior acquaintance. Nevertheless, the latter is deemed to be important by many authors, as it is considered to be a source of trust and greater collaboration between participants. Indeed, it was found that although prior acquaintance can make it easier to collaborate in certain CoPs, it is not a sufficient condition for them to achieve their objectives. Thus, although being in the habit of collaborating can result in trust, which is generally considered to be essential to collaboration and learning, it is evident that participants need additional motivation to move the CoP forward and achieve its objectives. Moreover, it should be noted that women spent twice as long as men on CoP activities, on average, one hour versus half an hour for men. The following questions should be explored further: Are women more motivated by this form of learning and collaboration? Do they trust people more and are they more willing to share knowledge? Or, were the projects in which they participated more motivating or better led?



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5. Conclusion

To conclude, a number of factors related to the conditions and challenges associated with CoPs are summarized in order to identify those which would help promote the wider use of these collaborative learning practices.

It was mentioned above that participants' commitment was considered to be a crucial factor in the success of CoPs. In fact, the most successful CoP was one in which the participants' commitment was indeed important (Tremblay, 2004a). However, other factors can play a role in explaining the more mixed success of other cases: for example, the lack of dynamism on the part of the CoP leader, the frequent change of leaders, or the fact that some participants did not contribute much to the CoP although they maintained that they had learned a great deal by participating. These factors must be taken into account when developing learning through communities of practitioners.

It was also shown that the support offered to participants by the organization is viewed as a factor of success. However, our results indicated that most of the participants would not necessarily have wanted more resources or training (in conflict management, communication or problem solving) even though few had received the training. Therefore, our findings suggest that training and support resources are not such a key factor in the success of CoPs as is indicated in the literature. The commitment of participants is much more important or, at the very least, is able to compensate for this lack of support. Participants indicated that their organization's interest in the CoP had not increased over time and this also seems to be one of the challenges associated with the medium- and long-term viability of CoPs.

To sum up, there are three major challenges related to the implementation of this new form of learning and training through CoPs. First, to motivate individuals to participate in the project or the joint enterprise; second, to find the means to sustain the interest of participants but also of the organization which supports the learning project through the CoP; third, to establish a form of recognition (not necessarily monetary) of the participation of individuals, especially if they are expected to devote their time to it.

As regards the organizational conditions of success mentioned above, three major conditions of success of a CoP are retained. First, the organization that sponsors the CoP should assign a leader to it and that this person should not change too often. Second, participants must trust themselves as well as their colleagues so they can contribute actively to on-line exchanges without fearing that what they have written, which remains in the system, will be criticized. Lastly, participants should have enough time (ideally taken from working time, if the topic of learning is linked to work) in order to contribute and learn a great deal. We believe that if these conditions are not met, it will be hard to imagine that a CoP can be a valid means to develop forms of learning through the exchanges and interactions between peers, as suggested by the authors of works on communities of practice.

On the other hand, although the CoP experiences were examined over a relatively short period of time (6 to 12 months), they seem to offer a promising course of action for learning through peers, exchanges and collaboration. However, it should not be forgotten that these



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experiences are not implemented in a vacuum, but in specific organizational contexts. The analysis shows that these contexts should be taken into account (hierarchical or non-hierarchical culture, habit of collaboration, as well as social relations of work between individuals) since they will have an impact on the participants' commitment and the level of success of CoP experiments.

In any case, although relatively new, this CoP formula offers interesting prospects for learning, an aspect which is all the more interesting since a recent study by the *Centre d'études de l'emploi* (Paris) shows that learning while working is one of the factors that workers most appreciate in a job. Moreover, it is one of the main variables which encourages workers to stay on the job rather than taking early retirement. This factor needs to be explored further given the increasing concern about work force aging in Québec.

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