COMMUNITIES OF PRACTICE : A GENDERED ANALYSIS OF THEIR FUNCTIONING AND RESULTS ON THE BASIS OF A CANADIAN RESEARCH

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Abstract: This paper highlights various results from an action-research on communities of practice in Canada, in particular the main conditions and challenges of such new modes of knowledge creation and management and their gendered characteristics. It does this on the basis of seven case studies analysed in detail, as well as the results of a questionnaire survey administered to the participants of these 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, and some of these variables present interesting differences by gender and by age, as well as by type of organization.

1. Introduction

There is more and more interest in different forms of knowledge creation and management and the conditions necessary to succeed in such initiatives from the point of view of individuals and organizations. A great deal of this interest stems from the fact that organizations expect substantial gains from knowledge. Knowledge management is seen in many organizations as a source of potential competitiveness and innovation. The concept of communities of practice stems from this interest, but is viewed as a specific form of knowledge development, in principle more centred on the individuals and their exchanges than on "management" by the firm, although the firm does seem to have a role to play in fostering such initiatives. Thus, the use of communities of practice has emerged as a way to develop collective skills and organizational learning, in order to foster innovation and success for the organization.

Organizational learning is part of a broader concern related to 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 practice, 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 within the organization. The knowledge 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.

In this paper, we will first define this new form of learning and knowledge management- depending if it is looked at from the point of view of the worker or management - through communities of practice. We will 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 and underline a few interesting differences observed between different demographic variables. Age and gender came out as significant in some cases and we are particularly interested in the gendered analysis.

2. Communities of Practice

With this interest in workplace learning, a new concept has emerged, that is, communities of practice. 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.

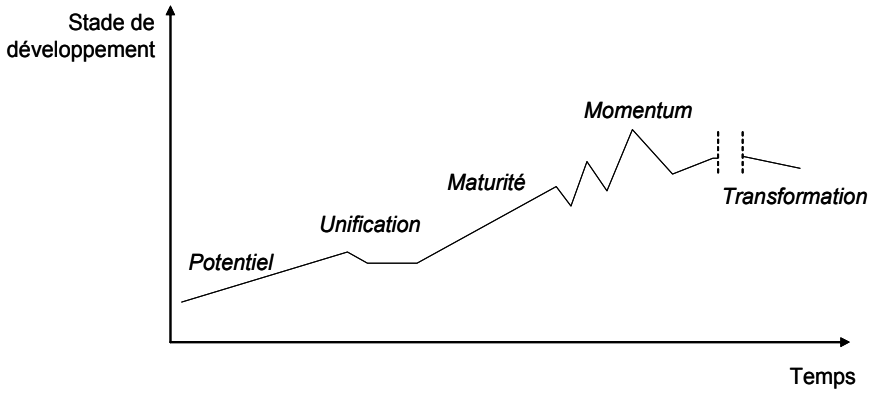
At first, authors mainly studied informal communities that were created spontaneously in a workplace. However, over the years, there has been increasing interest in the creation of such communities in workplaces (McDermott, 2001; Wenger et Snyder, 2000)., and even in the creation of teleworking communities that use information and communication technologies, as was the case of the project in which we participated.

As this article focuses on aspects related to learning and collaborative work, which are considered to be a source of knowledge management and innovation, 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.

Wenger et al. (2002) indicate that communities of practice are very diverse, but much of management literature seems to make little difference in characteristics and consider that community creation is an easy and simple thing. Much of the litterature also centers on face to face communities, while many function in a context of distance or telework, which brings us to talk of virtual communities of practice, which is what we studied in our project, and is more and more common in a global environment. In our view, this virtual dimension is an important dimension, especially in the global context, and it requires more detailed analysis, which is why this research was done.

Also, much of the literature does not take into account the temporal dimension, which we always do in our work (De Terssac and Tremblay, 2000), since it appears essential in analyzing organizations, which by definition evolve over time. The most detailed model of the evolution of communities of practice was presented by Wenger et al. (2002), but in our view it again presents a very normative portrait of communities of practice. Wenger et al. (2002) define five stages (see figure 1). At the beginning, the community is an informal network, a potential community. It then unites itself and acquires maturity, and then momentum, and becomes productive (Gongla et Rizzuto, 2001; Mitchell, 2002) until at some point, an event makes it essential for the community to change or renew itself. Again, this seems a little normative in comparison to the real life of communities, and we wanted to better understand the variables which influence the life of communities.

FIGURE 1 : STAGES OF DEVELOPMENT OF A COMMUNITY



Source : Adapted from Wenger et al. (2002), p. 69 and Bourhis and Tremblay (2004).

Let us now turn briefly to conditions of success of these communities. 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 participants must in principle share tacit knowledge, collectively build up knowledge, and solve production or service problems. In this context, in our view, the social relations between actors and demographic characteristics cannot be neglected, although they tend to be in the literature on communities of practice. We therefore turned to the literature on collaborative learning to dig into the reality more deeply and put forward new questions to the participants of the communities.

One of the main conditions mentioned in the literature on collaboration and collaborative learning (Henri and Lundgren, 2001) 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. In the Community of practice (CoP) literature, 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 in the CoP literature is one that is external to the participants -- the importance of the animator or leader of the CoP. These writings also underscore 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. Results from our Research

The results presented in this paper are derived from action research on a dozen communities of practitioners (CoPs) conducted under the aegis of the *Centre francophone d'informatisation des organisations* (CEFRIO[1]). 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.

3.1. 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

[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.cefrio.qc.ca ; www.teluq.uquebec.ca/chaireecosavoir.

communities were starting up, the objectives identified by the participants were usually 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. There appear to be criteria and conditions for CoPs to function and clearly, this type of arrangement cannot be transferred anywhere or globalized without taking into account these considerations.

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.

We analyzed the data on success or attainment of objectives according to various demographic variables, but only two (gender and age) came out significantly in some of the analyses. For various reasons, often lack of variance in the respondents, the other variables tested did not show up as significant: level of schooling, professional category, language have however been tested and should eventually be the object of more analyses.

Table 1 indicates the number of respondents per questionnaire; here, we center on the first questionnaire, that is the organizational and human resources management questionnaire, which was submitted, in slightly different versions (expectations, resultls) to the participants.

TABLE 1 – NUMBER OF RESPONDENTS PER QUESTIONNAIRE

	Time 1	Time 2
Organizational Questionnaire	178	106
Change Questionnaire	142	82
Technology Questionnaire	144	78
Questionnaire on learning	107	78

The success of the CoP was evaluated in different ways, amongst which the attainment of the strategic and operational objectives of the CoP according to the demographic variables and, as mentioned, analyses (ANOVA) revealed few significant links, except with gender and age, which we highlight here.

Table 2 highlights some gendered differences, but also an interesting convergence in many answers. Women systematically rate higher the various elements. They consider that the first objective of CoPs is to facilitate exchange and sharing of informatioin, followed by favouring excellence, developing competencies, favouring learning, better quality, better use of delocalized resources, valuing innovation and stimulating creativity.

The most important objective to them is also the one that is attained at a higher level, but less than expected. Let us recall that impotance was measured at time 1, while attainment of objectives is measured at time 2.

TABLE 2 – IMPORTANCE AND ATTAINMENT OF STRATEGIC AND OPERATIONAL OBJECTIVES, ACCORDING TO GENDER

Objectives	*gender*					
	men		***women***		***Total***	
	Importance[A] Moyenne N *Écart-type*	**Atteinte[B]** Moyenne N *Écart-type*	**Importance** Moyenne N *Écart-type*	**Atteinte** Moyenne N *Écart-type*	**Importance** Moyenne N *Écart-type*	**Atteinte** Moyenne N *Écart-type*
Valoriser l'innovation [A]t(142)= -3,32*** [B] n-s	4,00 55 *0,82*	3,54 26 *0,81*	4,44 89 *0,74*	3,53 51 *1,06*	4,27 144 *0,80*	3,53 77 *0,98*
Améliorer la relation-client [A]t(138)= -2,78** [B] n-s	3,83 52 *1,00*	3,10 21 *0,89*	4,26 88 *0,82*	3,18 38 *0,83*	4,10 140 *0,92*	3,15 59 *0,85*
Améliorer la qualité [A]t(140)= -2,86** [B] n-s	4,15 53 *0,93*	3,25 24 *0,79*	4,53 89 *0,64*	3,41 44 *0,95*	4,39 142 *0,78*	3,35 68 *0,89*
Valoriser l'excellence [A]t(142)= -2,09* [B] n-s	4,38 53 *0,69*	3,29 28 *0,76*	4,62 91 *0,65*	3,65 49 *0,97*	4,53 144 *0,67*	3,52 77 *0,91*
Rationaliser n-s	3,39 51 *1,22*	2,61 18 *0,92*	3,57 86 *1,14*	3,07 28 *0,94*	3,50 137 *1,17*	2,89 46 *0,95*
Valoriser les compétences [A]t(140)= -4,98*** [B] n-s	3,90 53 *0,81*	3,22 27 *0,93*	4,53 89 *0,66*	3,38 40 *1,00*	4,30 142 *0,78*	3,31 67 *0,97*
Efficience n-s	3,96 52 *0,91*	3,23 22 *0,92*	4,17 88 *0,90*	3,35 37 *0,95*	4,09 140 *0,90*	3,31 59 *0,93*
Faciliter l'échange et partage de l'information et des savoirs [A]t(94,58)= -2,11* [B]t(81)= -2,42*	4,49 55 *0,74*	3,48 31 *0,89*	4,74 92 *0,59*	4,00 52 *0,97*	4,65 147 *0,66*	3,81 83 *0,97*
Expérimenter une nouvelle approche de résolution problèmes [A]t(140)= -2,20* [B] n-s	3,98 55 *0,89*	3,60 30 *1,00*	4,29 87 *0,75*	3,78 51 *0,86*	4,17 142 *0,82*	3,72 81 *0,91*
Mieux utiliser les ressources délocalisées [A]t(143)= -2,42* [B] n-s	4,09 55 *0,97*	3,44 25 *1,00*	4,46 90 *0,82*	3,81 43 *0,96*	4,32 145 *0,90*	3,68 68 *0,98*
Réduire les effectifs n-s	2,17 54 *0,97*	2,45 11 *0,93*	2,32 78 *1,04*	2,39 23 *1,08*	2,26 132 *1,01*	2,41 34 *1,02*
Maximiser temps travail n-s	3,49 53 *1,15*	2,86 21 *1,01*	3,75 85 *1,08*	3,00 39 *0,95*	3,65 138 *1,11*	2,95 60 *0,96*
Diminuer la duplication [A]t(137)= -2,33* [B] n-s	3,98 54 *1,00*	3,28 25 *1,06*	4,37 85 *0,91*	3,39 44 *1,02*	4,22 139 *0,96*	3,35 69 *1,03*
Stimuler la créativité [A]t(140)= -3,93*** [B] n-s	3,87 54 *0,91*	3,32 28 *0,86*	4,43 88 *0,77*	3,64 50 *1,06*	4,22 142 *0,87*	3,53 78 *1,00*
Favoriser l'apprentissage [A]t(140)= -3,96*** [B] n-s	4,06 54 *0,76*	3,59 29 *0,82*	4,57 88 *0,74*	3,90 52 *0,89*	4,37 142 *0,79*	3,79 81 *0,88*

Légende :
[A] : Sur l'échelle d'importance où 1=pas du tout important; 2=peu important; 3=moyennement important; 4=assez important; 5=très important
[B] : Sur l'échelle d'atteinte où 1=pas du tout atteint; 2=peu atteint; 3=plus ou moins atteint; 4=atteint; 5=parfaitement atteint
n-s = T-Test non-significatif
*** p ≤ 0,001 ** p ≤ 0,01 * p ≤ 0,05

As concerns differences according to gender, in termes of strategic objectives, only the objective of valuing excellence presented a significant gendered difference. (tables available in Bourhis and Tremblay, 2004). For operational objectives as well, differences according to gender are not numerous, since only the objective of facilitating exchange and sharing of information was differentiated according to gender.

We mentioned that success was measured in different ways, not only in terms of attaining objectives as shown in tables 1 and 2, but as well in termes of learning and professional and personal enrichment. We only highlight the significant differences. We observed that success from the individual point of view is not strongly differentiated according to gender as concerns professional enrichment and satisfaction in participation, but women value more the personal enrichment they gained through the CoP. In other evaluations of success of the CoP, the numbers given by women are systematically superior to those of men, although not significantly.

Table 3 Measures of success from the individual point of view, by gender

gender		I found my participation in the CoP very enriching from a personal point of view	I found my participation in the CoP very enriching from a professional point of view	I am very satisfied of my participation in the CoP	I contributed a lot to the CoP
men	Mean	4,1765	4,6176	3,5000	3,0588
	N	34	34	34	34
	Standard Deviation	1,76619	1,68801	1,69223	1,73975
women	Mean	5,1176	5,2115	4,0769	3,7170
	N	51	52	52	53
	Standard Deviation	1,70466	1,69586	1,78057	1,85407
Total	Mean	4,7412	4,9767	3,8488	3,4598
	N	85	86	86	87
	Standard Deviation	1,78054	1,70795	1,75913	1,82874

Personal and professional enrichment as well as satisfaction were slightly differentiated according to professional category, but since there is little variance (most of the respondents are professionals), we do not show them here.

As concerns measures of learning, it is differentiated according to gender, women indicating that they gained more professional and personal learning in this context. As for the general measure of success (« the CoP was a success »), it is also differentiated according to gender, but this is not the case for other measures presented in table 4.

Table 4. Measures of success according to gender

gender		Cop Teamwork had a positive effect on work climate	CoP was a success	I think the global objectives of the CoP were attained	I would be interested in continuing to participate	the CoP was useful for my employer
men	Mean	3,5625	4,1935	4,3333	4,8387	4,5333
	N	32	31	30	31	30
	Standard deviation	1,54372	1,79665	1,80676	1,79066	1,83328
women	Mean	3,9375	4,9592	4,7143	5,3269	4,2979
	N	48	49	49	52	47
	Standard deviation	1,58995	1,87037	1,82574	1,77920	1,78051
Total	Mean	3,7875	4,6625	4,5696	5,1446	4,3896
	N	80	80	79	83	77
	Standard deviation	1,57266	1,86876	1,81647	1,78839	1,79294

Differences are more significant when data is analyzed according to age, as is shown in table 6. Again, for these statements, there were no significant differences according to professional categories, level of schooling or mastery of computer, which is interesting, since we might have thought that familiarity in use of computer would be more important for virtual communities of practice. This does not seem to be a structuring characteristic, that would determine success.

Table 6. Measure of success of the CoP according to age

AGE		Cop Teamwork had a positive effect on work climate	CoP was a success	I think the global objectives of the CoP were attained	I would be interested in continuing to participate	the CoP was useful for my employer
Under 35	Mean	4,2632	5,1500	4,7368	5,1905	4,8000
	N	19	20	19	21	20
	Standard deviation	1,44692	1,38697	1,69450	1,72102	1,70448
35 to 49	Mean	3,6863	4,7200	4,7143	5,4314	4,5208

	N	51	50	49	51	48
	Standard deviation	1,66722	1,89564	1,76777	1,48667	1,68838
50 and over	Mean	3,4000	3,4000	3,6364	3,7273	2,7778
	N	10	10	11	11	9
	Standard deviation	1,17379	2,17051	2,11058	2,57258	1,85592
Total	Mean	3,7875	4,6625	4,5696	5,1446	4,3896
	N	80	80	79	83	77
	Standard deviation	1,57266	1,86876	1,81647	1,78839	1,79294

Let us now complete this brief overview of one element of our research with a few elements on sources of satisfaction and sources of dissatisfaction.

3.2. 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.

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).

It must be noted that women's involvement in the project was often slightly higher than that of men, at least according to their own evaluation. More research needs to be done however on this issue of involvement and participation, according to gender, since it was not possible to determine whether other elements of context (organizational culture, financial context of the firm, the interest of the CoP project itself, etc.) might explain the stronger involvement of women in the cases covered here.

3.3. 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 a group of some 20 female 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 – composed of the female health professionals - was the most successful case

in our view, 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. These observations contribute to the existing literature on communities of practice, since it nuances the importance of prior acquaintance and organizational support, often considered as determinant characteristics of the success of communities of practice. Our research tends to highlight the importance of commitment, personal involvement and interest in learning from others. It may also be that the most successful groups had less difficulty working from a distance or teleworking (Tremblay, 2003, 2002)

The following questions should however 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 characterized by a better animation ?

4.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 litterature. The commitment or involvement 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 critized. 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 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, but we can see that it cannot be generalized without considering various dimensions: age, gender, commitment, and various characteristics of the community need to be taken into account, since they may have an impact on success and attainment of objectives of the community.

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