

A Facilitation Task Taxonomy for Communities of Practice

Halbana Tarmizi

University of Nebraska at Omaha

htarmizi@mail.unomaha.edu

Gert-Jan de Vreede

University of Nebraska at Omaha

Delft University of Technology

gdevreede@mail.unomaha.edu

ABSTRACT

The role of a facilitator is key to the effective establishment and sustainment of Communities of Practice (COP). This paper presents a taxonomy of facilitation tasks that have to be carried out to support various COP processes that take place during the different stages in a COP's life-cycle. Inspired by facilitation research in the area of Group Support Systems (GSS), we identified 33 facilitation tasks. These tasks are grouped into internal facilitator roles (Information Source, Inspirator, Guide) and external facilitator roles (Information Source, PR Manager, Investigator). The COP facilitation task taxonomy can serve as a basis for training COP facilitators, as a guide for COP facilitators to prepare for and assume their role, as a starting point for developing tool support for COP facilitators, and finally as a research instrument to study COP facilitators in the field or devise experimental treatments focusing on facilitation of large online groups.

Keywords

Communities of Practice, facilitation, Group Support Systems, facilitation task taxonomy.

INTRODUCTION

Communities of Practice (COP) are social structures that focus on knowledge creating and sharing and explicitly enable the management of knowledge to be placed in the hands of practitioners (Wenger, 2004). COP have been identified as playing a critical role in the promotion of learning and innovation in contemporary organizations (Swan, Scarborough and Robertson, 2002). However, establishing and sustaining COP within organizations is not a trivial task. There are several challenges that can derail COP initiatives, including, but not limited to, making a case for COP (Muller and Carey, 2002), finding common topics for members (Dube, Bourhis and Jacob, 2003), securing trust of shared information (Van House, Butler and Schiff, 1998), and lowering barriers among members to involve in knowledge sharing activities (Ardichvili, Page and Wentling, 2003).

There are several roles involved with COP that can assist in addressing such challenges. In a case study of COP at 18 firms, Fontaine (2001) identified the following key roles within a COP: The 'facilitator' role, which is the most time consuming role with up to 53.4% of a person's assigned work time per week, followed by the 'admin/event coordinator' role and the 'technologist' role with 26% and 25%, respectively. According to Fontaine (2001, p.18) the facilitator role is responsible to "network and connect community members by encouraging participation, facilitating and seeding discussions and keeping events and communities activities engaging and vibrant" (p.18). It appears that a facilitator can play a crucial role in addressing the challenges in establishing and nurturing a COP (Fontaine, 2001; Kimball and Ladd 2004). This leads to a number of important questions: What exactly constitutes the facilitator role? What are the crucial activities that make an effective COP facilitator? In which areas should a COP facilitator be trained? Without any guidance or training the COP facilitator role could become a significant challenge for those who were assigned to fulfill this role. Yet there appears to be paucity of research on facilitation in COP.

Therefore, the goal of the research presented in this paper is to develop a facilitation task taxonomy for COP that will benefit both organizations and facilitators. For organizations, such a task model could assist in identifying the right person to fulfill the facilitation tasks. Also, organizations could use this model as a basis for COP facilitator training. For COP facilitators, a task model could help in preparing for their role and understanding the complexity of their responsibilities. For practitioners, a facilitation task taxonomy could inspire the development of COP tools, since it would provide insight into the kind of features facilitators might need to support their activities in the COP. Finally, for researchers a task taxonomy could be a useful instrument to study COP facilitators in the field or to devise experimental treatments focusing on the effect that COP facilitator interventions may have on a number of relevant COP performance indicators.

Although there appears to be a dearth of facilitation research in the context of COP, facilitation has been extensively studied in the area of Group Support System (GSS), see e.g. (Bostrom, Anson and Clawson, 1993; Dickson, Limayem, Lee-

Partridge and DeSanctis, 1996; Griffith, Fuller and Northcraft, 1998; Niederman, Beise and Beranek, 1996). We use the findings of GSS facilitation studies as a foundation to develop the COP facilitation task taxonomy. Therefore, the following questions will guide our research:

- How different is the facilitator role in COP compared to the one in GSS?
- What does a facilitation task taxonomy for COP based on GSS facilitation research look like?

The remainder of this paper is structured as follows. The next section provides background information on COP. Then, we review the role of facilitation in GSS environments. Based on these insights, the fourth section presents our facilitation task taxonomy for COP. We conclude the paper with the discussion of this model and its usefulness.

COMMUNITIES OF PRACTICE

COP can serve several purposes in organizations, including providing a forum for sharing ideas, solving problems, disseminating best practices, and organizing knowledge (Wenger, McDermott and Snyder, 2002). Through organizing knowledge, for instance, as suggested by Robey, Ross and Boudreau (2002), a COP can help in overcoming knowledge barriers at the time of an IT adoption process in an organization.

A variety of definitions have been proposed for COP (Hildreth, Kimble and Wright, 1998). Wenger et al. (2002) define a COP as a group of people informally bound together by shared expertise and/or passion for a joint enterprise. A defining feature of COP is that they, more or less, emerge spontaneously from the informal networking among groups of individuals who share similar interests or passions (Lave and Wenger, 1991). In recent years, however, COP are increasingly initiated by a sponsor in senior management level (“top-down”), instead of emerging spontaneously (“bottom-up”) (Fontaine, 2001).

As organizations start to recognize the value of COP, an important question becomes how to consciously foster the development of these communities. Yet, there is no single formula or algorithm that guarantees the successful building and sustaining of a COP. Different approaches can be used, e.g., “top-down” or “bottom-up” (Fontaine, 2001), and different technologies can be utilized, ranging from simple and free Yahoo!Groups to dedicated software such as Simplify from Tomoye.

No matter which approach or technology is involved, there is a myriad of challenges in establishing and maintaining a COP. To start with, making a case for a COP can be hard. Since COP mostly do not produce tangible outcomes, their benefits may not be easy to specify or quantify (Muller and Carey, 2002) and can only be perceived on the individual or community level (Millen, Fontaine and Muller, 2002). Establishing trust also represents a challenge for a COP. Muller and Carey (2002) argue that the lack of trust across groups may be a key barrier to effective information sharing activities. Further, a COP has to address interesting and relevant topics. Having the right topic for its members is a necessity for a COP, especially in the early stage of community formation (Dube et al., 2003). A topic that is too broad may create sub-communities within a community, while a topic that is too narrow may attract few participants.

Another challenge concerns recruiting the right members, e.g., knowledgeable members who have enough time for social interaction (Pawlowski, Robey and Raven, 2000). When a community relies heavily on computer-mediated communication, then having members with experience in online communication will bring benefit to the community (Pawlowski et al., 2000). Finally, to effectively sustain a COP, organizational support is required, e.g. in the form of the infrastructure for the COP (Wenger and Snyder, 2000). This may include information technology, incentives for engaging in communities, and support for the relevant COP roles. An ideal COP technology should support all required processes within the COP with features that can be used to encourage and support the community members’ social engagement. Social engagement can be fostered through features such as a common space with channeling mechanisms to encourage members to observe the general activities of the community, or notification services to bring attention to members about new materials (Millen and Patterson, 2002).

In the end, the key issue for sustaining a COP is the participation level of its members. The greater the number of active members, i.e., members that are enthusiastic participants in activities and topics created by others, the higher the chances that the community will thrive. Hildreth, Kimble, and Wright (2000, p. 30) argue: “...Participation is central to the evolution of the community and to the creation of relationships that help develop the sense of trust and identity that defines the community”. By providing incentives for their employees to participate actively in COP, organizations could play a mediating role in sustaining communities. Supporting COP roles, in particular that of the facilitator, would help the community and its members to navigate through existing obstacles (Fontaine, 2001) and keep it flourishing.

FACILITATION IN GSS ENVIRONMENTS

Research on facilitation in Group Support Systems (GSS) environments has produced valuable insights into various facilitator tasks and responsibilities. Various researchers have demonstrated the importance of facilitation in GSS meetings, see e.g. Clawson, Bostrom and Anson (1993). Facilitation in GSS environments is defined by Bostrom et al. (1993, p. 147) as a "...set of functions or activities carried out before, during, and after a meeting to help the group achieve its own outcome. The essential characteristic of facilitation is to help make an outcome easier to achieve." There is a distinction between 'technical facilitation' and 'group process facilitation' (Clawson et al. 1993). Technical facilitation is aimed at assisting the participants with the technology and is often executed by a chauffeur or technographer (Dickson et al. 1996). In general, technical facilitation does not focus on smoothing communication processes and providing goal oriented direction to the group. Group process facilitation moderates participants and their interactions regarding stated and emergent tasks toward creating meeting outcomes in GSS meeting.

Facilitation tasks may focus on meeting *process* or meeting *content* (Griffith et al. 1998). Process facilitation provides structure and general support to groups during their interactions. It involves ensuring that an equality of participation is achieved, blind alleys are not overtly explored, and time is managed appropriately (Eden, 1990). Content facilitation focuses on the content of the meeting, analyzing the data, and displaying relevant issues. With content facilitation the facilitator gives more information or direction than the impartial information or direction provided with process facilitation (Griffith et al. 1998). While some argue that facilitators should not make content contributions (Griffith et al. 1998), others maintain that content and process facilitation are not exclusive and should inform each other to achieve a multiplier effect (Eden, 1990).

Dickson et al. (1996) distinguish between two types of process facilitation: '*task interventions*', meant to focus the group's attention on the task, and '*interactional interventions*', aimed at the participants and their relations. The tasks of a facilitator with these two types of interventions differ significantly (table 1). Other authors, such as Clawson and Bostrom (1996), do not differentiate between types of interventions. They collected information from experienced GSS facilitators about their most important tasks and categorized the feedback into sixteen facilitation dimensions. These dimensions show the qualities a facilitator must have and the functions (s)he must execute during a meeting (table 2).

Task interventions	Interactional interventions
<ul style="list-style-type: none"> • Structure group activities • Guide the agenda • Clarify and rephrase issues • Keep discussions on topic • Reformulate questions or problems • Summarize • Test agreements among participants • Identify decisions 	<ul style="list-style-type: none"> • Equalize participation of participants • Identify communication problems • Solicit feedback • Manage conflict • Provide and aid the group's emotional climate

Table 1. Task interventions vs. interactional interventions (Dickson et al., 1996)

Not only functions, but also skills and qualities of character are believed to be important factors in being successful at helping groups to achieve their goals. Niederman et al. (1996) interviewed 37 facilitators with different levels of GSS experience. From these interviews, a number of required qualities of character came forth (table 3). The importance of these qualities was perceived differently between experienced and non-experienced facilitators. More experienced facilitators considered 'flexibility' important. This may be due to some insecurity of non-experienced facilitators about the reliability of the GSS technology. The most important qualities appeared to be 'good communication skills' and 'ego-less facilitation'.

Facilitator functions and qualities	
1. Plan and design the meeting	2. Listen to, clarify and integrate information
3. Demonstrate flexibility	4. Keep group outcome focused
5. Create and reinforce an open, positive and participative environment	6. Select and prepare appropriate technology
7. Direct and manage the meeting	8. Develop and ask the right questions
9. Promote ownership and encourage group responsibility	10. Actively build rapport and relationships
11. Demonstrate self-awareness and self-expression	12. Manage conflict and negative emotions constructively
13. Encourage/support multiple perspectives	14. Understand technology and its capabilities
15. Create comfort with and promote understanding of the technology and technology outputs	16. Present information to group

Table 2. Facilitator functions and qualities (Clawson and Bostrom, 1996).

Facilitator skills and qualities	
Good communication skills	Ego-less facilitation
Flexibility	Task focus
Understanding the group and its objectives	Leadership

Table 3. Facilitator skills and qualities (Niederman et al., 1996)

FACILITATION IN COMMUNITIES OF PRACTICE

In this section we present our task taxonomy for COP facilitation. This taxonomy is organized around the stages of development that a COP may go through and the different processes that take place in each stage. Below we first elaborate on stages in COP development and present a four-stage model as a foundation for COP processes. Then we present relevant COP processes in each stage and identify related facilitation tasks.

Stages in COP Development

Gongla and Rizzuto (2001) argue that communities evolve through several stages. The communities show different characteristics as they move from one stage to another. According to Gongla and Rizzuto, this evolution is not like a life-cycle, i.e., a community can mature and dissolve at any stage. This evolution model is similar to Wenger’s (1998) and McDermott’s (2000), except that these authors take a life-cycle perspective. Table 4 compares the three perspectives on stages in COP development. For a definition of each stage see Gongla and Rizzuto (2001), Wenger (1998), and McDermott (2000).

Gongla & Rizzuto	Wenger	McDermott
Potential	Potential	Planning
Building	Coalescing	Start-up
Engaged	Active	Growth
Active	Dispersed	Sustain
Adaptive	Memorable	Close

Table 4. Stages of COP development

Regarding Gongla and Rizzuto’s evolution model, it is hard to clearly distinguish between the engaged, active, and adaptive stages. As Gongla and Rizzuto (2001, p. 846) point out, the fundamental functions of those stages are access and learning at the engaged stage; collaboration at the active stage; and innovation and generation at the adaptive stage. In line with Wenger et al. (2002), we believe that each COP will serve key purposes such as providing a forum for problem solving, similar to engaged stage, or disseminating best practices, similar to adaptive stage. Therefore, we consider these three stages as one and call it the ‘active’ stage, similar to Wenger’s active stage. In Wenger’s (1998) model, the ‘dispersed’ phase could also be considered ‘active’, since the COP still functions as a centre of knowledge even though the members no longer engage very intensely. We adopt Wenger’s concept of a post-active phase, called ‘memorable’ phase, where the COP is no longer operational, yet people still remember it as a significant part of their identities. We refer to this as the ‘inactive’ phase. Finally, we argue that McDermott’s (2000) ‘growth’ and ‘sustain’ phases can be considered to jointly represent the ‘active’ phase. Therefore, our life cycle stage model for COP has the following four stages:

1. The potential stage, when potential members or sponsors explore the possibility and desirability of setting up a COP;
2. The building stage, when the community is set up but has not officially started, e.g., it may run as a pilot community;
3. The active stage, when the community has officially started, takes off, shows rapid growth, and becomes a routine part of the organization; and
4. The inactive stage, when the community may exist, although the members are no longer active and no longer use the community.

We propose that this four-stage model assists in understanding COP processes. Next, we examine various processes within each of the stages.

Processes within COP and Facilitation tasks

Gongla and Rizzuto (2001) identified several COP processes that take place within each stage. We take these processes as a starting point to define the COP processes in our four-stage model (see table 5). We do not elaborate on the ‘inactive’ stage, as a COP facilitator no longer plays a role in this stage. Some COP processes are decomposed into sub-processes to enable a more finely-grained description of the activities within a community. For example, “finding new members” is decomposed into: (i) identifying potential members; (ii) locating potential members; and (iii) discovering what they already know.

To identify the tasks a facilitator has to perform for each process, we ask the question, in what way can a facilitator be helpful in this process? To answer this question we used the following strategy. We first mapped each of Clawson and Bostrom’s (1996) facilitation tasks to each appropriate COP (sub)process. We selected Clawson and Bostrom’s model (1996) as it can be considered to be the most specific and comprehensive, covering the facilitation tasks proposed by other researchers (Vreede, Boonstra and Niederman, 2002). After mapping Clawson and Bostrom’s (1996) tasks, we identified further facilitation tasks from the literature on COP and available COP case descriptions. Each (sub)process was critically examined to identify further facilitation tasks. The resulting mapping of facilitation tasks to COP (sub)processes is depicted in table 5 (the facilitation task numbers refer to the corresponding Clawson and Bostrom (1996) task).

Process	Facilitator tasks
1. Potential stage	
1.1 the need to set up a COP is identified	scan the environment
	report to management
	gather info from various sources
1.2 find each other	
1.2.1 identify potential members	scan the environment
	gather info from various sources
1.2.2 contact potential members	initiate the contact to potential members
	promote community-to-be to potential members
1.3 discover commonalities	4-5-10
1.4 bring individuals together	12-16
1.5 explore connectedness	1-4-5-6-8-9-13
2. Building Stage	
2.1 define the scope	4-5-6-8-13-15
2.2 define the membership	4-5-6-8-13-15

2.3 define the type of community	4-5-6-8-13-15
2.4 classify member knowledge	4-5-15
2.5 define the roles	4-5-15
2.6 define up norms for members	4-5-15
2.7 define strategy to attract new members	4-5-15
2.8 set up mechanism to share tacit knowledge	4-5-15
2.9 set up mechanism to share explicit knowledge	4-5-15
2.10 align the enabling technology	4-5-14-15
3. Active Stage	
3.1 find new members	
3.1.1 identify potential members	implement strategy to attract new members scan the environment gather info from various sources
3.1.2 locate potential members	initiate the contact to potential members promote community to potential members
3.1.3 discover what new members already know	4-5-8-15
3.2 introduce new members	7 present important info to the new members encourage new members to participate present new members to community members answer new members' concerns
3.3 adapt to changing circumstances	
3.3.1 re-examine & modify community definition & scope	4-5-8-15 scan the community 10 come up with suggestions
3.3.2 sense and assess the organizational environment	scan the organization 10
3.3.3 adjust responsively to the environment	4-5-8-15 come up with suggestions
3.3.4 gather and manage feedback	4-10
3.4 renew interest, commitment	1
3.5 execute life-cycle process for developing & managing knowledge	
3.5.1 develop & disseminating communications	8-9-13-15
3.5.2 support tacit knowledge exchange	8-9-13-15
3.6 involve in group problem-solving	
3.6.1 involve in decision-making process	4-5-6-8-9-10-13-15
3.6.2 enhance community learning	4-5-8-9-10-15
3.6.3 focus on innovation	4-5-6-8-9-10-13-15
3.7 ensure self-governance & self-regulation	report COP progress to sponsors/management advocate COP independency before management inform management concern to members act as moderator between management and COP
3.8 position the COP in its environment	
3.8.1 integrate with organizational processes	guide the community to match organizational process
3.8.2 link with other communities	communicate with other communities
3.8.3 mentor the formation of new communities	respond to outside requests share experiences with potential communities
3.9 develop advanced boundary processes	4-5-8-9-10-15

Table 5. COP processes and facilitation tasks

For some processes, Clawson and Bostrom's (1996) facilitation tasks appeared to comprehensively cover that specific process, e.g., for "defining the roles" (2.5). One can argue that "defining the roles" is similar for COP: (prospective) members gather offline or online and discuss the roles within the community. Therefore, the facilitator in this process should (i) listen

to, clarify, and integrate information from those participants; (ii) develop and ask the right questions that could help participants in this process; and (iii) encourage multiple perspectives during this process in order to achieve the best outcomes. In some other processes, the combination of Clawson and Bostrom's (1996) facilitation tasks and new tasks are needed. An example of such a process is "introducing new members" (3.2), where the facilitation task "creates comfort with and promotes understanding of the technology and technology output" (7) is considered one relevant facilitation task. However, three additional facilitation tasks are considered necessary to adequately support this process: "presenting important information to new members", "encouraging new members to participate", "presenting new members to community members", and "answering new members' concerns." Some facilitation responsibilities are not covered by Clawson and Bostrom's (1996) tasks at all, especially when the COP processes are related to interaction with the COP's external environment. An example is "Positioning the COP in its environment", including its subprocesses "integrating with organizational processes", "linking with other communities", and "mentoring the formation of new communities." These subprocesses require new facilitation tasks: "guiding the community to match organizational process", "communicating with other communities", and "responding to outside requests".

A categorization of COP facilitation tasks

The analysis of COP processes and supporting facilitation tasks resulted in 33 COP facilitation tasks – 14 from Clawson and Bostrom's (1996) model plus 19 new ones. Together, these tasks can be grouped into a number of categories. First, they can be divided over two broad categories: internal and external. "Internal" refers to tasks that are directed toward the internal functioning of the COP, toward the processes inside the community. "External" refers to tasks that are related to the functioning of the COP as a whole in its broader organizational environment. The "internal" category can be subdivided into three facilitator roles:

- Information source, including all tasks that are related to providing information to the COP's members.
- Inspirator, including all tasks that focus on encouraging members to be active in the community.
- Guide, including all tasks that concern assisting and advising the COP and its members.

The "external" category can also be subdivided into three facilitator roles:

- Information source, including all tasks that are related to providing information about the COP to the outside world.
- Public relations manager, including all tasks that focus on representing the interests of the COP and its members to the outside world.
- Investigator, including all tasks that concern searching for and/or collecting useful information for the COP and its members.

Figure 1 presents the complete taxonomy of COP facilitation tasks grouped into the aforementioned categories.

DISCUSSION

This study investigated facilitation tasks in COP, identifying similarities and differences between facilitation tasks in GSS meetings and in COP. Overall, 33 COP facilitation tasks were identified. Of these, 14 tasks were inspired by GSS meeting facilitation, and 19 tasks were identified based on an analysis of COP processes. Our COP facilitation task taxonomy shows that the COP facilitator role appears to be broader and more complex than the GSS facilitator role although there are many similarities. An important reason is that the COP facilitator has more of an external representative role than a GSS facilitator, as evidenced in our taxonomy. Further, the nature of a COP as a long-lasting group, consisting of a large number of people (Ferran-Urdaneta, 1999) increases the facilitator's portfolio of responsibilities.

Many of the COP facilitation tasks could help in addressing the challenges in establishing and sustaining communities that were discussed in Section 2. First, the challenge of finding an interesting and relevant topic for potential members (Dube et al., 2003) can be addressed with the tasks of "gather information from various sources", and "act as moderator between management and (future) community". Second, the challenge in recruiting members (Pawlowski et al., 2000) can be addressed with the tasks "scan the environment" to find prospective members, "implement strategy to attract new members", "initiate contact to potential member", and "promote community-to-be to potential members." Finally, the challenge of establishing trust (Muller and Carey, 2002) can be addressed through a number of tasks, including "create and reinforce an open, positive and participative environment", and "promote ownership and encourage group responsibility".

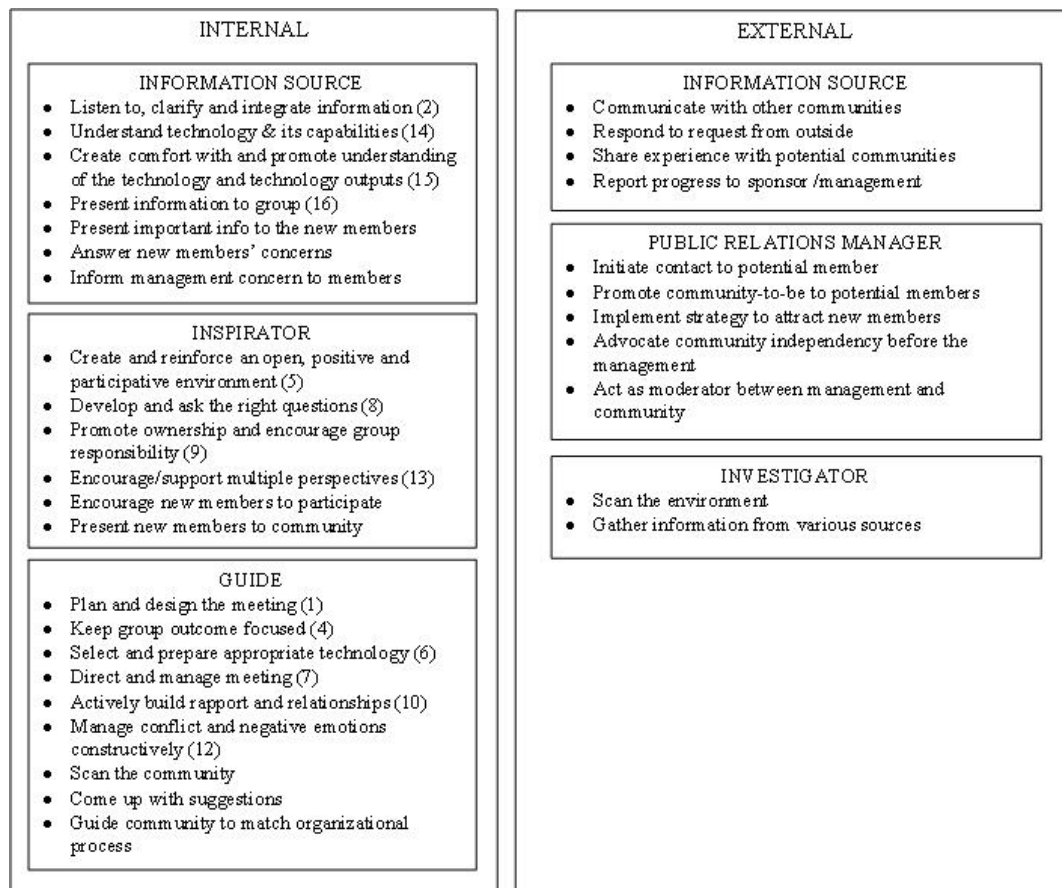


Figure 1. The COP Facilitation Task Taxonomy

CONCLUSION

COP can foster knowledge creation and sharing within and between organizations. To enable the establishment and sustained functioning of a COP, it is important for the community to be effectively facilitated. In this paper we have presented a taxonomy of facilitation tasks that have to be carried out to support various COP processes that take place during the community's potential, building, and active stages of development. Our COP facilitation task taxonomy contributes in understanding the dynamics and processes within COP and in planning for, establishing, and nurturing COP.

This taxonomy can serve as a foundation for further research on facilitation in COP. Understanding the role of a COP facilitator and associated tasks and responsibilities is crucial to address some of the challenges that have been identified with respect to the effective functioning of COP. Furthermore, our task taxonomy can be helpful in (i) training facilitators for their role in a COP, (ii) designing technology support for the facilitation of COP processes, (iii) evaluating COP facilitator performance, and (iv) guiding research on the facilitation of online communities.

We envision a number of directions for future research to address some of the current limitations of our study. First, we plan to validate our taxonomy through a quantitative and qualitative survey of experiences of COP facilitators. Second, we plan to incorporate different perspectives on COP facilitation, e.g., the COP member perspective or the organizational management perspective, to accumulate a deeper understanding regarding COP facilitation requirements.

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