

DEMYSTIFYING VIRTUAL COMMUNITIES OF PRACTICE: A Case Study of IBM

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ABSTRACT

The purpose of this proposed research study is to empirically explore the nature of virtual communities of practice (CoP) in a global organisation within the context of its International Corporate Volunteer (ICV) Program. This study investigates whether and how the use of virtual CoP evolves and becomes embedded within this organization.

Following the logic of inductive research, a qualitative case study will be proposed here, to gain insight on the extent to which virtual CoPs can be utilized. For this purpose, a global business organisation that established a partnership with a Canadian non-profit organisation and implements a corporate volunteer program is proposed.

Although previous studies confirmed the important role that the quality of dialogue plays in the cultivation of effective communities of practice this study shows that despite the quality of exchanges, virtual CoP are not necessarily utilized due to some alternative channels of communication.

1. SOCIAL LEARNING THEORIES

Recent epistemological and psychological theories have moved focus away from the individual to the social and constructive nature of knowledge. In contrast to the acquisition perspective which considers the mind as being a container, knowledge as a substance and learning as the transfer and addition of substance to mind, the participation perspective derives from studies of learning which understands learning as participation in communities of practice (Lave & Wenger, 1991). Accordingly, knowledge is socially constructed through collaborative efforts in dialogic interaction (Salamon, 1997). Cognition is also based on distributed access to information and a shared understanding amongst participants (Hutchins, 1995).

The learning implications of this epistemology are profound. First, learning is situated, contextual and closely tied to the situation in which knowledge is being created (Brown et al., 1989; Lave & Wenger, 1991). Legitimate peripheral participation occurs through the attainment of the subjective perspective of individuals engaged in a shared enterprise that is contained within artifacts, behaviour and language (Lave & Wenger, 1991).

Learning is more about becoming a practitioner through social interaction with others than learning about the practice (Brown & Duguid, 1991). Newcomers are moved to the status of full practitioners through a social process of scaffolding by experienced practitioners, shrinking the zone of proximal development to enable the novice to become a contributing member of the community (Brown & Duguid, 1991).

The concept of Communities of Practice (CoP) could be operationalized as an empirical construct to provide a useful framework from the social learning perspective (Novicevic et al., 2007). Lave and Wenger are credited with coining the term CoP in their 1991 book, *Situated Learning: Legitimate Peripheral Participation*, in which they examined how “master practitioners” and “newcomers” form apprenticeship relationships through which situated learning takes place. To Lave & Wenger (1991), learning is a process that takes place in a participation framework, not in an individual mind. This means, among other things, that it is mediated by the differences of perspective among the CoP participants. It is the community, or at least those participating in the learning context, which ‘learn’ under this definition. (Lave & Wenger, 1991, p.15). Thus, the notion of CoP was first used, “to describe the way in which meaning was negotiated and reflected on in the practices of specific occupational groups . . .” (Wesley & Buysse, 2001, p.7).

CoP s are ‘groups 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 on an ongoing basis.’ They operate as ‘social learning systems’ where practitioners connect to solve problems, share ideas, set standards, build tools, and develop relationships with peer and stakeholders . . . [They] feature peer-to-peer collaborative activities to build member skills and steward the knowledge assets of organizations and society (Wenger & Snyder, 2000).

CoP s can also be understood as spaces through which “communicative action” can take place (Polanyi, 2002). They are mediated by and through the social construction of knowledge (Wenger, 2004). CoP s are said to exist at the intersection of intellectual and social capital—through which social networks serve as the basis of knowledge creation and transfer (Kent et al., 2009; Lesser & Prusak, 2000; Wenger, 2004; Wenger & Snyder, 2000). It is believed, “those communities of practice are valuable to organizations because they contribute to the development of social capital, which in turn is a necessary condition for knowledge creation, sharing, and use” (Lesser & Prusak, 2000, p. 124).

CoP framework has come to be applied to both “intra” or “inter” organizational settings, described as “existing everywhere” as an “an integral part of our daily lives” (Wenger, 1998, p. 6,7). Wenger has taken the concept of CoP and extended it into a comprehensive theory of how organizations and individuals within organizations work together (1998). In his book, *Communities of Practice: Learning, Meaning, and Identity*, Wenger describes organizations as essentially “constellations of communities of practice”, and asserts that CoP can transcend organizational boundaries and/or exist within and across formal networks (1998, p. 30). CoP are also widely referenced in the literature to analyze strategic alliances and cross-sector collaborations (Toby, 2000; Lathlean & le May, 2002; Dewhurst & Navarro, 2004). These studies suggest that inter-organizational networks and collaborations are fertile ground for the application of CoP theory.

The second feature of a CoP is the matter of engaging in a “joint enterprise,” which Wenger and his associates describe as the realm of purpose and “domain”—referring to its common purpose and the sense of members’ identification with a topic or practice (Snyder et al., 2003). “Communities of practice are groups formed around a shared interest in which discussion builds on the values and motivations of their members” (O’Donnell et al., 2003, p. 83). These interests and the common purposes that are derived from them are “communally” negotiated (Wenger, 1998, p. 78). “Practice is, first and foremost, a process by which we can experience the world and our engagement within it as meaningful” (1998, p. 51).

A CoP's joint enterprises are said to be held together through "mutual accountability" (1998, p. 81), essentially the level of reciprocity that exists between and among members of a CoP. Wenger's third feature of a CoP is the existence of a "shared repertoire," (1998, p. 82) that can be understood as the realm of tools and techniques (Wenger & Snyder, 2000).

The shared tools and techniques of a CoP are the medium through which meaning is negotiated and learning occurs.

A shared repertoire can include informal conversation around a lunch table to a structured protocol to guide dialogue and decision-making. Wenger & Synder (2000) also state that CoP are no longer the new frontier of organizations and have become as common as business units or teams; these informal structures require specific efforts to be integrated into the organization so that their full power can be leveraged (Wenger & Snyder, 2000; Dean & Peter, 200).

When it comes to applying the CoP framework to organizational settings, consideration should be given to the modes of communication used within and between CoP s. These modes of communication include face-to-face interactions as well as the use of various information technologies. The literature regarding the place of "virtual communities of practice" most often looks at the role of information technology within the context of the existence of on-line CoP (Davenport & Hall 2002; Daniel et al., 2002; Henri & Pudelko, 2003).

These studies point to the importance that the CoP framework has taken on as a tool to assess the quality of on-line communities and the role that information technology (both from a hardware and a software perspective) has in the process. Whether it is through face-to-face interactions or via electronic forums, CoP members will engage in some form of dialogue with each other. Studies have been conducted examining the quality of "virtual discourse", the role of storytelling and narrative development, the adoption of common language and assessment of the quality of dialogue (Gajda & Koliba, 2007).

These studies confirm the important role that the quality of dialogue plays in the cultivation of effective communities of practice. CoP dialogue has been measured in terms of frequency, degrees of structure and quality of exchanges, and aligned to systemic evaluation of data and decision-making (Gajda & Koliba, 2007).

Conceptual Framework

Based on these related theories and definitions of social learning, virtual CoPs will be defined in this research study as *the entity of all processes of communication, collaboration and connectedness*. For this to occur, there must be a system of individuals, technology and organisational elements and the interactions of these elements:

- Individuals are the most obvious part of virtual CoPs: if there are no individuals within the organisation, then nothing will happen. Therefore, human beings are the focal point of OL.
- Technology is often the most visible part of virtual CoPs:, since it represents the tools that human beings use to do activities. Technology refers to physical systems or tools - machinery, tools, equipment, software programs, databases, and so on.

- Organisation refers to the formal managerial systems under which virtual CoPs function. For instance, communication channels, hierarchy of responsibilities and tasks, and other formal organisation manifestations will greatly influence individuals and their actions.

This points out to the need to focus not only on the individual elements, but in particular on their mutual interplay. The definition proposed above emphasizes the formal and informal way in which human beings interact as an essential constituent of virtual CoPs:.

RESEARCH METHODOLOGY

The study is designed to explore the nature of OL facilitated by IBM's CSC program and the role that online collaboration tools play in fostering or inhibiting OL. Consequently, an embedded naturalistic case study approach (Patton, 1980; Yin, 1984) is adopted. The qualitative design for this study draws upon Glaser and Strauss (1999), Miles & Huberman (1994), Patton (1980), and Strauss & Corbin (1997).

Research Context

As companies work to grow and thrive in a globalized economy, they have increasingly utilized International Corporate Volunteer (ICV) programs to enhance organisational learning. One of the organizations that develop volunteer programs so that their employees can provide expertise to small businesses, nonprofits, and universities on specialized international assignments is IBM.

Being one of the leading organisations in the field of technology, IBM implements an ICV program called Corporate Service Corps (CSC) in partnership with a Canadian based non-profit organisation- DOT (Digital Opportunity Trust) - so that the employees work on cross-border volunteer projects, alone or in teams, for a period of two weeks to one year.

Employees work with small businesses, government agencies, non-profit and charity organizations, and associations in varied industries. They leverage their core competencies and skills to provide consulting services in functional areas such as marketing, finance, IT, project management, and strategic planning.

The CSC program gathers teams of IBM Leaders with a diversity of skills, drawn from different countries and business units and places them in emerging markets to tackle important social and economic issues in collaboration with DOT. The IBM Leaders work on projects in four-week assignments. Under the CSC programme, IBM deploys employees in teams of 8-10 people for a four week period in a country. The experience is followed by a period intended for sharing the experience inside and possibly outside of the company. Because most ICV programs comprise a relatively short period in the field, pre-assignment training is also provided to build a cohesive team, prepare participants for the cultural and technical aspects of the assignment, and allow them to work with their clients to develop and refine project activities. IBM facilitates 3 months of pre-work for CSC teams.

The pre-work materials are delivered and managed through a learning delivery software package, and they include team-based and individual assignments. Teams also meet virtually on a weekly basis for the 3 months before they depart on assignment. Because the team members are from many different countries and likely have never met, pre-work focuses heavily on team-building.

It also assists the participants in honing their cultural intelligence, consulting, and communication skills with respect to working in international teams and living in their host country.

IBM also assigns a number of staff to work with the team during pre-work, including team facilitators, country-specific advisors (staff who are either from a CSC country or who work there), and alumni from previous CSC assignments in the same country. IBM's global non-profit partner DOT also participates in pre-work, providing necessary information about the project, logistics, partner information, and country specifics.

DOT has in-depth knowledge of key countries that spans business operations, culture, challenges and opportunities for the private, public, and non-profit sectors. Consequently, DOT identifies local partners and projects that complement the company's culture, mission, and goals for an ICV program.

A Case Study Approach

A qualitative case study methodology is appropriate for exploring a concept for which there has been no previous research in a given context (Yin, 1984). According to Yin (1984), case studies are the preferred strategy for research that asks "how" and "why" questions.

Data Collection

This research study includes in-depth online interviews with the participants of the virtual CoP and related stakeholders from two organisations, a review of existing organizational documentation, and observations of online collaboration tools such as the CSC program wiki, IBM intranet including Lotus Notes as well as related online communities and video or tele-conferencing sessions. Data collection for this case study is guided by qualitative methods outlined by Glaser and Strauss (1999), Miles & Huberman (1994) and Strauss and Corbin (1997). The data are collected primarily through online interviews with the participants of the OL programme as well as the related stakeholders from both organisations and corroborated through participant reflections and a review of organizational artefacts.

The study includes online interviews with participants of the IBM CSC program as well as key individuals from the non-profit organisation DOT that supports IBM in implementing the program. As it was expected that DOT Program Managers would be most likely to provide reliable information regarding this program implementation, key informants were identified together.

Data Analysis

The spirit of qualitative analyses essentially lies in making sense of massive amounts of data and translating the intangible ideas into comprehensive frameworks. Miles and Huberman (1994) suggest three concurrent steps for the analysis process: data reduction, data display, and conclusion drawing and verification. Data will be analyzed in this manner within cases and across cases. The specificity of the semi-structured online interview protocol is a factor in leading to these themes. The verbatim transcripts (using the original English, as used by the interviewees) will be read through twice by the researcher without making any notes to get an overview of the information that the participants provided. Then, through continued reading, the data has been read again, with the researcher coding the categories of themes as they emerge. Next, reading through the transcripts again, themes have been identified within each category and the findings will be discussed with participants.

The company documents provided by participants will be included in the text analysis. Observation notes related to OL program wiki, IBM intranet including Lotus Notes as well as related online communities and video or tele-conferencing sessions also provide useful information in understanding the process of online collaboration the interviewees described.

DISCUSSION

The online collaboration platform used for IBM's ICV program is divided into an internal intranet working area with all CSC key docs for the country teams and an external area for photos, videos, blogs, press releases etc is effective for the country teams. This platform is also linked to the IBM CSC website as well as the non-profit's. Key program documents included are:

- 1) Program Planning Documents;
- 2) Statement of Works;
- 3) Team workplans;
- 4) Overall Team Presentations;
- 5) Deliverables of country teams to local partners; 6) Deployment Reports and 7)

Photos, videos and blogs regarding the ICV program (See Figure:1).

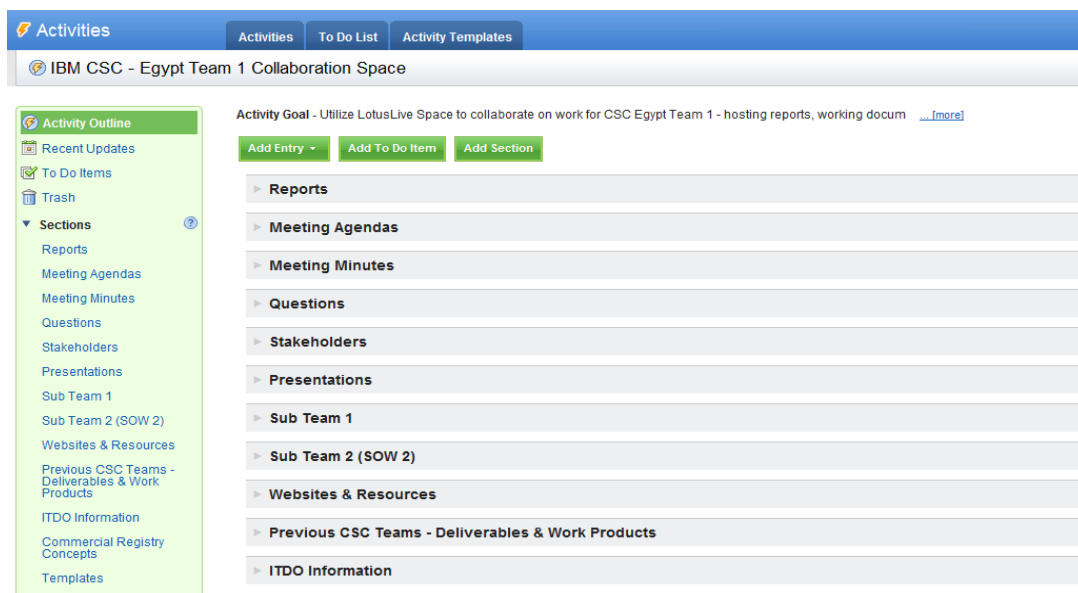


Figure: 1
Overview of Virtual CoP

In terms of the efforts made to increase the use of the virtual CoP within the context of this ICV program one of the interviewees made the following statements:

"We don't really do much in social media with our NGO implementation partners. We provide a virtual CoP for our participants to blog, share pictures and post videos. A small area is given to each NGO partner to provide an overall summary. But otherwise we don't do much more than that."

So, contrary to the popular belief, the use of the virtual CoP is not always preferred and widespread even within a company like IBM. When asked about the key factors/building blocks that enable or disable IBM to facilitate the use of the virtual CoP one of the senior level IBM managers made the following remark:

"The important question to ask is what value would we create by doing more in this arena. If we had a clear answer to that question we'd invest more in this space."

When asked about how many times online collaboration tools are used to exchange information with related stakeholders it has been stated that as e-mail is constant the participants of the ICV program don't use any online collaboration tools with non profits. On the other side, one of the participants also stated:

"If we had an open, easy to use web-based platform for sharing preparatory learning that would be helpful."

So, although in terms of providing knowledge sharing opportunities with colleagues, e-mail has been stated as the most popular tool there is also a need for utilizing online collaboration tools.

In terms of the key concerns regarding the use of online collaboration tools in relation to knowledge-sharing; privacy, people multi-tasking and not focusing on content have been cited. Additionally, none of the interview participants could be sure in terms of the factors that made them you feel more engaged with the online collaboration tools. Regarding the benefits expected in return from individual contributions to the exchange of idea via the use of virtual CoP; efficiency has often been mentioned as a clear goal.

Based on these findings, it should be taken into account that the virtual CoP, especially the social media (blogs, wikis) are not necessarily utilized in even global companies; so caution must be given that their value is not overestimated. While clearly more research needs to be done in this area, e-mail still seems to be the popular tool in OL programs in terms of knowledge exchange despite the existence of alternative online collaboration platforms.

CONCLUSION

As in any qualitative study, the conclusions from this study cannot be generalized to the larger population of all business organisations or other types of organisations. One limitation, therefore, is that this study has focused only on one specific organisation that established a partnership with a non-profit organisation due to its International Corporate Volunteer program.

Although previous studies confirmed the important role that the quality of dialogue plays in the cultivation of effective communities of practice this study shows that despite the quality of exchanges, virtual CoP are not necessarily utilized due to some alternative channels of communication.

It should be taken into consideration that my own experiences and relationships also potentially affect the level of participation as well as interpretation of data. Both researcher and reader bring their conceptual structures, schemata and an unfolding of realization.

As Stake (1995) states, as a case researcher I might have failed to pass along to readers some of the information and the reader might also reconstruct the knowledge in ways that leave it differently connected and more likely to be personally useful. Yet, as the literature suggests, there is little evidence that helps to inform education, practice, policy, and research about issues surrounding the effective use of virtual CoPs for organisational learning. While the study tries to illuminate the important factors related to the adoption of virtual CoPs in this organisation, it also tries to explain the benefits and challenges in using collaboration technologies for knowledge transfer between different organisations. As a result, the study aims to provide improvements and new directions for similar future partnerships.

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