

Learning from Each Other: Online and Face to Face Communities of Practice

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Abstract: This paper presents a reflection and analysis of the similarities and differences in the development process of virtual and face to face Communities of Practice (CoP). A qualitative and quantitative analysis of various CoPs with a total community membership in excess of 300,000 is used as a basis for reflection and understanding. The authors advocate that CoP managers need to appreciate this topic in order to understand in which context they can apply which management tools to enable healthy CoP development. Five main streams of CoP development (domain definition, community building, practice development, support establishment, and reflection, self-assessment, renewal) are considered. The paper concludes with a presentation of some emerging research questions in the light of the findings of the presented research.

1. Introduction

Over the last ten years, it has become obvious that Communities of Practice (CoPs) are one of the most powerful instruments for fostering and managing networking and collaboration [6]. When it comes to CoPs, one can easily distinguish between two different types determined by the location of their members as well as the mode of and the tools used for interaction among them: virtual and face to face.

There is a lot of interesting literature referring to collaboration in either virtual or face to face Communities of Practices (CoPs). However, there is no established literature comparing the differences and similarities of collaboration management in both kinds of working structures. Some authors (eg.[2]) identified that virtual communities are a natural enhancement of the Community-concept in an increasingly disparate working environment, and that the lowest common denominator of both cooperation forms is social communities. This is an informing element of our research, but not its main focus.

Taking into account the growing importance of CoPs for the management of collaboration, the time is now ripe for an in depth analysis of the similarities and differences between both collaboration forms and the consequences of its results for effective CoP management.

2. Research Approach

Existing literature on face to face and online Communities of Practice covers only one of the working structures, rather than the similarities and differences between both. As a starting point, the authors will first consider definitions and characteristics of both types of

CoP and thereafter come up with suggestions concerning collaboration management. The basis for the theoretical definitions is WENGER'S [2] characteristics for CoPs: Knowledge domain, Community and Practice. These three characteristics are different in either a face to face or a virtual environment, and the definitions will build on those differences.

The analysis of the CoP characteristics will be done using the CoP development model from WENGER/SNYDER [5]. Within their model, the authors identified five activities of CoP development linked in an iterative process (fig. 1). It should be stressed however that CoP development is not a simple linear iterative cycle. In fact it is additionally one of systemic development and renewal as illustrated in figure 1 below. This will be used as a basis for analysis and reflection of the studied CoPs in this paper (see tables 1).

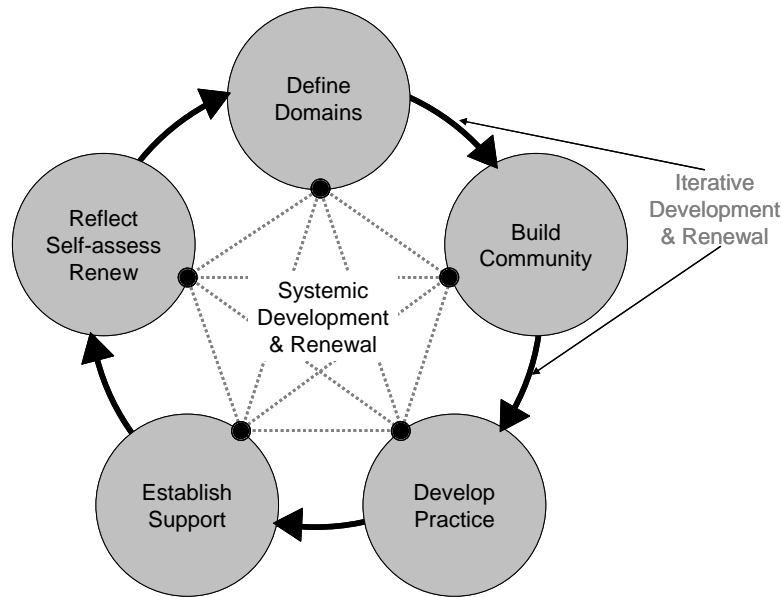


Figure 1: CoP Development and Renewal

The qualitative and quantitative data used for analysis is based on a comprehensive study of a number of face to face and virtual (online) CoPs that the authors have worked with as members and moderators. These CoPs and related brief background information is shown in table 1.

Table 1: Communities of Practice Analysed

Communities of Practice Analyzed	
German Automotive Company	90 Face to face CoPs in a big German Automotive company: The Passenger Car Development of this company decided in early 2000 to set up a around 100 CoPs in eleven technology fields for fostering horizontal collaboration across functional units on passenger car elements and processes. The CoPs have been accompanied by a lessons learned database where the knowledge created in the CoPs has been stored. The deployment process lasted two years. In 2005, these CoPs are still the heart of the KM system of the company [7].
Chrysler Motors	50 Face to face CoPs researched at Chrysler: In the late 80th, Chrysler moved to car platforms which are cross-functional, product based structures. By this, the company gained the advantage of product focus but lost the ability to learn from its own experience. Former colleagues from functional teams started to meet informally; management recognized this and started to support these informal meetings. The so called 'Tech Clubs' are today responsible for design reviews and the consolidation of the Tech Club Knowledge in a database [5].
Customer Management Community	A young online CoP on Customer Management with 70,000 members: The Customer Management Community (CMC [3]), Europe's leading CRM service, provides highly valuable news, information, advice and best practice case studies to help members make the most of customer management activities, achieve core business objectives and help improve the ROI of their CRM programmes. The membership consists of around 70,000 members worldwide. Over 50% of the membership is in the the UK and Europe while another 22% of members are in the US and Canada. Asia is a growing area of the membership at 16%. Members are primarily CRM, Marketing, Sales, and IT professionals and 'C' level executives. Many of the members are consultants but a lot work for large corporations and household names.

Communities of Practice Analyzed	
Knowledge-Board	A middle-aged CoP on Knowledge Management with more than 12,000 members: KnowledgeBoard [4] is a KM portal funded by the European Commission under the Information Society Technologies Programme (IST-) and a growing community of over 12,000 KM professionals throughout Europe and the world. KnowledgeBoard's aim is to provide a space for information exchange, discussion and debate to define 'Knowledge Management - Made in Europe'. Separate areas dedicated to specific interests (Special Interest Groups) are given to voluntary editors with expertise in those sectors, inspiring a self-generating and moderating content stream and discussion.
Accounting-Web	A mature online CoP on Accountancy with over 90,000 members: AccountingWEB [1] is the most successful online accountancy community with over 90,000 active UK based members. As well as news, members gain access to dozens of online resources from benchmarking to specialist practical tax information. The community is very strong; with over 80,000 unique visitors to the site each month the members themselves have created the first port of call for accountants looking for expert advice and guidance.

3. Analysis and Reflection

This section is dedicated to the analysis and the comparison of the action stream elements within the above described five inter-related action streams in virtual and face to face CoPs.

3.1 Define Domains

The activity stream 'define domains' includes according to [5] the following sub activities:

- Define and discuss what knowledge within the domain (e.g. KM, accounting) will contribute most to performance/is most valuable to the daily work of the CoP members
- Map issues and knowledge sub areas for the chosen knowledge domain.

Within the observed face to face CoPs, the process of defining the knowledge domain, of identifying subtopics and member competencies as well as of prioritizing problem areas usually happens in moderated discussions in face to face meetings. There are different occasions that create among the members of a face to face CoP a need to (re)define their knowledge domain:

1. In the start up phase of the CoP, members usually need to develop a common understanding what the knowledge domain they are going to work on is all about and to get to know each other. The CoP manager can support these processes by stimulating and coordinating member presentations introducing themselves, their knowledge domain related present work topics and contexts, actual projects and problems. Problems and potential discussion topics should be collected in a list and prioritized in a democratic and open process. As this process will take some time, it might be of favour to organize at least one off site meeting for defining the knowledge domain of the CoP.
2. In the daily CoP work, the agenda of meetings must allow to not only stick to the discussion point list defined in the CoP start up phase but also to discuss actual problems and issues. Here, it helps to reserve a time frame in the agenda dedicated to 'Current hot topics'.
3. In order to support the continuous development process of a CoP, the members should regularly reflect on their knowledge domain. This process needs to be strongly fostered by the management (see 3.5 in this paper).

Overall, the management of face to face CoPs concerning the CoP knowledge domain means rather the efficient use of group discussion moderation methods and meeting coordination than instructing a group what to work on. It is vital that managers of face to face CoPs understand from the very beginning that it is not their task to define the topic the group is going to work on but that the CoP members define their domain based on the relevance of topics to their current work and on their personal competencies and interests.

In virtual CoPs, the process of defining the knowledge domain, prioritizing hot topics and identifying the competencies of CoP members is much less structured and more implicit than in face to face CoPs:

Within the special interest groups (SIGs) of the KnowledgeBoard, volunteers apply for a virtual space dedicated to a specific topic domain they would like to work on. Once this space is set up, the SIG editors present their ideas about the knowledge domain and hot topics to the overall community of about 10 000 registered KnowledgeBoard members and around 15 000 unregistered users ('lurkers'). This task includes the publication of documents they would like to discuss in the frame of their topic as well as the set up of online events as workshops and Q&A sessions. The community is then invited to comment on the published documents, to post new documents for publication, to start discussion threads and to participate in online events. These activities performed by the KnowledgeBoard members and the number of hits of documents are the indicators for the SIG editors on what is relevant within their knowledge domain to the wider CoP. Comments and publications by members also allow editors to understand their specific interests and their competencies.

Accountingweb and CMC have a more managed approach with tighter timescales owing to their direct relation to specific market sectors and members with very little time who are in regular business competition with each other. Much of the domain definition is led by 'editors' from the markets themselves. Current affairs lead to articles, which lead to discussion - all within a matter of hours (unlike KB which is much longer-term). As with KnowledgeBoard, the communities' interests and domain identification can be seen through the website metrics of comments, page views and other postings. Members are also able to publish practice-related problems as well; as with the articles, the most popular ones are regularly those with the greatest relevance to the domain. From this, the managers draw heuristical assumptions as to the key domain issues. It is poignant to mention that the 'non-professional' area of Accountingweb, "Humour-born dull?" is exceptionally popular as well, identifying a requirement of the community to share experiences in an informal manner as well as analyse and discuss sector-specific issues.

In general, defining the knowledge domain in virtual CoPs is a process which is related much less on direct communication than in face to face CoPs as it is not based on discussions in regular (face to face) meetings. There are rare occasions when members of the same SIG meet face to face, and the results of those meetings are often not captured thereafter in the virtual space. Thus, managers of virtual CoPs have the difficult task of finding out what areas of the knowledge domain are relevant to their members without knowing them personally. They have to rely on heuristics based on statistical figures as numbers of comments on a specific topic and numbers of downloads of documents. An instrument that might help them to prove their hypothesis of relevant and hot topics within their knowledge domain would be a member survey. On the other hand, managers of virtual CoPs have much more power to define the frame of the topic area according to their own interests. Their major challenge is to integrate the interest areas of the other members into their topic frame in order to make the interest into the virtual CoP stable and vital.

3.2 Build community

The second activity stream includes the following sub activities:

- Find all the peoples who should participate
- Identify potential leaders, core group members
- Organise events to bring participants together (e.g. monthly meetings, workshops, teleconferences)

Within organisations, the identification of potential CoP members can be organised in a structured process (WOLF 2003). Usually, a project team defines cross functional topic areas where CoPs are regarded as adding a value to the existing business processes. Thereafter, potential CoP managers are either identified by the project team or nominated by the line management. Once convinced to take over this role, the CoP managers recruit actively further members from all business units affected by the future CoP work, supported again by the line management and the project team. Kick offs are then organised by the CoP manager and the project team, the organisation of all further meetings is the responsibility of the CoP manager. New CoP members are usually continuously introduced by prior ones: They are either new employees or people that have competencies that the CoP members identified as missing in their group. All new members have to be approved by the existing ones.

In the context of face to face CoPs, the task of managers again is more related to supervising a proper member identification and integration process and the organisation of events over the lifetime of the CoP than to control and direct the CoP activities.

In virtual CoPs, the process of identifying is much less structured and transparent than in face to face communities:

Accountingweb and CMC are continuously re-defined by current affairs and topics of interest at specific (and unpredictable) times (eg. The end of the financial year in the UK, or a new government budget will bring large spikes in activity and debate, and emergent shared problems and solutions). Also, individuals will come and go as their availability allows - being pan-organisational there are no benchmarks of interaction, nor can the managers enforce any appearance through organisational structures.

On KnowledgeBoard, the SIG editors have difficulties identifying their members. Owing to strict data protection laws, members can engage on entirely their own terms; people interested in specific activities can be defined and contacted only if they choose a public identity in the 'who's who section'. For example, comments or postings lead to a who's who page which is entirely the domain of the member; they do not have to put any real information in and no structural requirement exists to enforce it.

SIG editors can promote membership in the editorial of their page, but interested members have to apply themselves ('opt-in' membership rather than the more marketing led opt-out membership). Mechanisms like special newswires on hot SIG topics provide the motivation to do so. Another method for SIG editors is to invite people who had topic related publications elsewhere to join their SIG. But even if people commit to membership in a SIG, it is difficult to get them to maintain it in terms of regularly posting comments and articles. People come and go, and the SIG leader is not able to force them to take any action.

In general, one can draw the insight that face to face CoPs are relatively closed , *virtual* CoPs relatively open. What is missing in virtual CoPs from a management perspective are mechanisms that help to identify potential CoP members and sustaining their commitment as e.g. the assigned of member by the hierarchy in organisations or the daily common work tasks that bring members together regularly. *This is considered of some great benefit to those who are less inclined to being managed!*

3.3 Develop practice

To develop the practice of a CoP includes:

- Decide how to share and develop knowledge (e.g. invite speakers)
- Specify what to document (e.g. standards, best practices)
- Identify the tools and facilities the community will need (e.g. an EBoK).

Developing the practice is one of the most crucial tasks of the CoP work as it defines the process of working together.

In original face to face CoPs, this process is very much pre-defined [7]: The project team in charge of the CoP is usually setting up a general CoPs process including guidelines on frequency and duration of CoP meetings, what to document and quality criteria of good documents, where to document CoP results (usually there is a database provided and run by the project) as well as essential roles and responsibilities.

Organisational CoPs are usually forced by the management of the organization to comply with these minimum regulations as they will have to report back to the management and are measured against management criteria related to the given frame for CoP work. However, organizational CoPs are usually not stopped if they want to modify these structures a bit, but they have to justify the changes.

Thus, CoP managers are here getting into a controlling and reporting position. For them, it is usually difficult to justify controlling activities among the CoP members as these are seen as unproductive tasks. It is a difficult balance CoP moderators have to work out, they are in a kind of a 'sandwich- position' between the management and the CoP members.

Developing the practice in virtual CoPs is more restricted by technology than by the management of the platform. This varies from platform to platform; as with all technological work, changes occur every day, although it is estimated that in a few years, different platforms will be able to interface with Application Programming Interfaces (APIs) or, more simply, open standards schemas for xml transfer. The technology defines which tools can be used for the exchange of documents and real time communication. However, managers of virtual CoPs and the platform are usually interested in a good quality and quantity of communications and documents. Thus, every online CoP has specified rules as a netiquette, editing guidelines and document quality criteria and a process for checking document quality. Quantitatively, document downloads, page views, number of comments, regularity of visits can be measured, offering managers indicators of activity, but very little research exists as yet to identify the softer elements of member to member interaction and the patterns therein. Likewise, members can download documents, or view pages, but that does not mean that they have read them!

On KnowledgeBoard, these documents are regularly updated by the management and agreed with the SIG editors. Usually, this happens after a face to face meeting of the SIG editors and the management team. In those meetings, the SIG editors also ask for further tools and support with specific tasks. The commonly agreed technical strategy of the KnowledgeBoard is to keep the platform robust rather than experimental thereby retaining member data, rather than risk the community's history by competing with non-beta-tested platforms.

Owing to their market-spread of members, Accountingweb and CMC use regular polls and surveys to identify community needs and issues, rather than choose one organisation's strategic intent. Also, domain experts are invited to online workshops to share knowledge and practical experience - this model is soon to be added to KB's events portfolio. Domain experts are also invited to post library items, continually building on the communities' knowledge resources. Identifying these issues is based on simple heuristic analysis from the community measurement indicators (as above) as well as managerial decision-making.

3.4 Establish support

The following action streams are related to establishing CoP support:

- Find a corporate sponsor for the community
- Identify HR policies and IT facilities required to support the community
- Coach leaders and core group members (e.g. training, provide meeting facilitation)

The establishment of support is very important for both face to face and online CoPs. Both kinds of CoPs are usually structurally supported by a team that runs the platform and provides services to the CoP as there are training sessions for CoP members, meeting facilitation, conflict moderation, content scouting and interviews etc.. In addition, both types of CoPs rely usually on some kind of sponsorship by either directors of the company or topic thought leaders. The task of the CoP managers is pretty much the same in both types of CoPs: Nurturing the connections to sponsors and staying in close contact with the support team. However, the selection of possible sponsors in organizations is usually restricted as potential sponsors are pre-defined by organizational decisions.

KnowledgeBoard has the management of its partners, providing support to the SIG editors through the SIG support team (including a Community Steward). Accountingweb and CMC communities are supported by individual community managers; 'sponsorship' as such is driven by the 'editors' and their assessments of current affairs and marketplace changes.

It is notable that as well technical and theoretical sponsorship, any multi-organisational CoP will encounter the need for financial sponsorship. In the case of Accountingweb and CMC, this requirement is met with advertising; this is familiar to many other groupware and publishing platforms not specific within an organization (paying for the web space and software is expensive); Yahoo groupware now places advertisements between pages, Google groupware now includes links to its highly successful 'adwords' and integrates its groupware's activity into its search engine. Even the emergent self-defining networks of bloggers loosely linked with trackbacks etc. are sponsored by the individuals' ultimate resource: Time (and more adwords!).

3.5 Reflect, self-assess, renew

Reflection and self assessment processes are crucial for the development of CoPs. Thus, CoPs need to initiate a continuous process of reflection and self assessment for the community to renew itself.

Face to face CoPs have the great opportunity of regular meetings. Here, the CoP manager can easily schedule and supervise a reflection process on the CoP done in a certain period of time (e.g. half a year, one year). Self assessment should address both CoP internal organizational questions and the results of the CoP work in terms of contents. The reflection gives also an occasion to document success stories, to identify what has been achieved and to plan future activities on a more strategic level. Regular reflection ensures motivation and continuous development of CoPs.

In virtual CoPs, the reflection processes is much more difficult to achieve. They need either a face to face meeting of the core CoP members, a survey, or strictly managed online workshop using chat room technology with a published transcription. These can be supported by the management team of the platform, but although they stimulate the reflection of individual members, they are not creating the kind of common sense one can reach in face to face reflection workshops.

Another method to help trigger reflection in online CoPs is the publication of the thoughts of the CoP managers on what has been achieved in editorials and newswires or success stories by gurus or scientific publications on the CoP. KnowledgeBoard's 'Themes' worked on this premise and has proved to be popular with the community at large (not just those interested in the specific issues).

All these remain 'find-able' via search engines un-changed - unlike face to face workshops, an online workshop's transcript is 'as it happened'. Virtual CoPs have the advantage that they remain open to discussion and the reflection process can continue with comments etc., but the core issue of motivation remains un-answered.

For reflection, virtual CoPs should be supported by face to face meetings if there is budget. With the growth of the knowledge cities concept (Entovation, KnowledgeBoard), it is possible that localized group members can meet and report back to the CoP as a whole.

4. Conclusions

This paper presented the results of a comprehensive comparative study based on qualitative and quantitative data on face-to-face and online communities of practice. The development and renewal of CoPs was seen as both a linear iterative as well as systemic process covering the following main streams: domain definition; community building; practice development; support establishment; reflection, self-assessment, and renewal. Along these streams, the paper identified certain action points that a CoP manager/moderator can use within each type of CoP for stimulating discussion and continuous development and renewal of the CoP. It was noted that while certain similarities did exist between face-to-face and online CoPs, there were clear differences as well. As an example, while face-to-face dialogue typically triggers more common understanding and knowledge exchange, it is one off. Whereas, in an online CoP, the knowledge exchange is continuous and documented as the discussion evolves. This in itself calls for a certain degree of trade-off or combination of the two types of CoPs.

Several new research questions emerged through the analysis presented in this paper, two of which are highlighted here:

- Online CoPs contain a new breed of CoP member: the lurker, or passive member. The question naturally emerges as to whether the lurker is a result of insufficient technological confidence, or a member who would not typically take part in a face-to-face CoP? Along the same lines, it would be interesting to observe as to how many non-participant or passive members in a face-to-face CoP are active members in an online CoP.
- One of the most significant differences between managing online and face-to-face CoPs is the use of web metrics to analyse activities within online CoPs. Many more online quantitative analyses tools are available than in the case of face-to-face CoPs, but these do not reflect the qualitative elements of online CoPs, which are easier to assess face to face (we are human!). Online CoPs can use surveys, but a finding herein is that there is a large potential for research in identifying and linking online communication patterns to web metrics, thus spotting 'good' conversations and 'learning' as opposed to more dominant patterns of interaction, or others.

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