

Emergence of a Community of Practice: a Case Study

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Abstract. The aim of the paper is to report our observation and analysis of the emergence, carried out in the framework of the PALETTE¹ European project (FP6-TEL), of a young Community of Practice in the higher education domain, the ePrep CoP, composed of French and francophone teachers sharing practices and conducting TeLearn projects for enlarging the access to the French "Grandes écoles". By highlighting the main propitious conditions of this emergence, we aim at building a framework for supporting CoPs in carrying out and developing learning activities for their members. First, we describe the ePrep CoP story following the Wenger, McDermott and Snyder's five steps of the life of CoPs. We then highlight four propitious conditions that supported ePrep CoP to emerge and plan its development. We finally propose guidelines for CoPs to emerge, especially regarding the use of services and tools that could support this process of emergence.

Keywords: Community of practice, Emergence of community.

1 Introduction

Communities of Practice (CoPs) are groups of professionals who share their knowledge, discuss the meaning of their professional know-how, and produce new insights about their daily practices on an ongoing basis. For this purpose, most of CoPs use web services and other tools for organizing their activities.

According to Wenger (1998), CoPs emerge in any situation of life because people need to discuss their ways to consider and experience life. In professional contexts, such discussions have to be structured and framed by specific processes. Even if many CoPs emerge "naturally", it is however possible to create and cultivate them (Wenger, McDermott, & Snyder, 2002). These authors for example suggest to plan and launch new CoPs through different actions such as determining the primary intent of the community, defining its domain, identifying engaging issues, identifying potential coordinators leaders, contacting potential members, connecting community members, etc.

We present here the genesis and development of the ePrep CoP, a young Community of Practice in the higher education domain. The emergence of the ePrep

¹ PALETTE (Pedagogically sustained Adaptive Learning through the Exploitation of Tacit and Explicit Knowledge - <http://palette.ercim.org>), Integrated Project co-funded by the European Commission (FP6 Call4 Febr. 2006 – Jan. 2009)

CoP, composed of French and francophone teachers sharing practices and conducting TeLearn projects for enlarging the access to the French "grandes écoles", has been carried out in the framework of the PALETTE¹ European project (FP6-TEL). The purpose of this project was to collaboratively design services, tools, scenarios and activities for the development of learning, knowledge management, collaboration and information sharing within CoPs.

Through the five steps of the life of CoPs (Wenger, McDermott & Snyder, 2002 - Fig. 1), we aim at highlighting how the ePrep association developed the concept of CoP and in which conditions this community emerged throughout years. In order to present its emergence, we interviewed the ePrep CoP coordinator, and circulated a questionnaire to 6 members of the ePrep CoP.

We then highlight four propitious conditions that supported ePrep CoP to emerge and plan its development.

We finally propose guidelines for CoPs to emerge, especially regarding the use of services and tools that could support this process of emergence.

2_ Emergence and Development of CoPs: a Framework

Following Wenger, McDermott and Snyder (2002), five steps mark the emergence and development of CoPs. In the first step, potential, an informal network is created about a topic related to a professional issue. A first community of interest is created with no clear objective, activity or organization. In terms of expended energy and visibility, the level of the community is low. The first activity will be to identify a specific domain and objectives as well as first activities coordinated by a moderator.

At the second step, coalescing, the CoP grows in terms of members and sense of belonging. They feel related together through common questions and professional practices. First activities will be organized in order to develop this sense as well as the need to get together and reflect on their practices.

The third step, maturing, is characterized by different cycles of activities aiming at clarifying the purpose of the CoP, the role of the moderator and the borders of the group regarding other professions or domains. The CoP also looks at new members in order to reach a critical amount of interactions and diversity among the members' levels of expertise.

In the fourth step, stewardship, the main challenge for the CoP is to maintain its structure and rhythm of activity: production, reflection, sharing, etc. It also aims at diversifying its activities in order to achieve the needs and personal objectives of its members. The role of the moderator is then to evaluate regularly the activities and propose new insights from the outside in order to develop the common practice that appears within the CoP.

Finally, the fifth step, transformation, can take different forms. The CoP can simply die because of lack of members or activities, or because all its first goals have been achieved. It can also define new challenges and issues and transform, possibly with new members and activities.

Generally, the first step takes several months before the CoP reaches a certain rhythm of activity with a sufficient amount of members (CEFRIIO, 2005).

The figure below summarizes these five steps regarding time and the energy and visibility of the CoP.

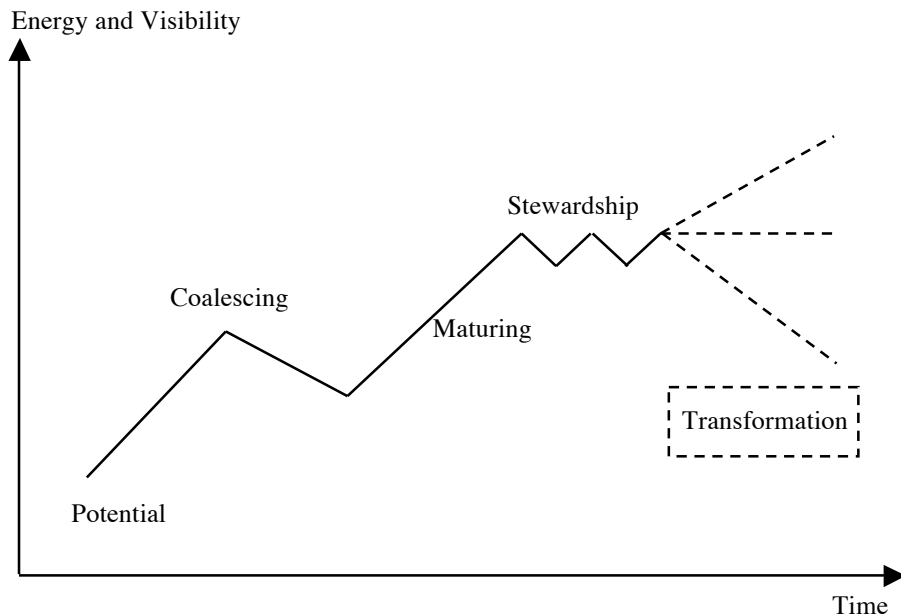


Fig. 1. The five steps of the life of CoPs (Wenger, McDermott & Snyder, 2002).

In the following section, we use this framework for analyzing the emergence of a CoP.

3 The ePrep CoP Story

ePrep is a French non-profit organization created in 2001. In a first time, ePrep has particularly developed actions for the expansion and the development of “Classes préparatoires aux grandes écoles” (CPGEs²) through the use of Information and Communication Technologies (ICT), in France and abroad. The year 2006 offered to ePrep new opportunities, including a participation to the R&D projects supported by the European Commission (ePrep was a partner of the PALETTE project), the

² CPGEs or CPGE (Classes préparatoires aux grandes écoles) are a first higher education cycle that prepare students for the competitive entrance exams to the French "Grandes écoles". These include engineering schools, military academies, National Veterinary Colleges, Business and Management Schools and PPE Institutes. CPGEs exist in France (including overseas territories) and in a few other countries (Côte d'Ivoire, Gabon, Morocco, Tunisia, Turkey, Vietnam). In total, there are some 7 500 CPGE teachers for 75 000 students.

creation of a steering committee chaired by the president of the “Conférence des grandes écoles”, and the launching of the ePrep Community of Practice (ePrep CoP), gathering members from different institutions in France and French-speaking countries. At the end of 2008, ePrep enlarges its activities for the whole first higher education cycle in France and French-speaking countries through three main axes: the technology watch, the research projects, and the development of the ePrep CoP. Today, ePrep CoP members share practices and conduct Technology-enhanced Learning projects to facilitate the entrance to the “Grandes écoles”.

3.1 Step 1: Potential

The development of a community generally begins on the basis of an existing social network that shares a common interest (Wenger et al., 2002). The ePrep case is specific as the organization has not initially been formed as a CoP. Its genesis originates from a personal Web site developed in 2000 by a teacher in Physics in CPGEs. When the content of the courses of this teacher has been published online, teachers, students, in CPGEs or similar establishments, in France and abroad, expressed their interest in the site and in the pedagogical issues that it tackled. A virtual network was born, based on the same geographical disparities than today.

The enthusiasm and search for valorization of the professional identity of the teachers in CPGEs related to the ICT domain lead this teacher in Physics to create ePrep in 2001 in order to organize the first International ePrep Workshop (Sophia Antipolis – France, May 2002). The purpose of this workshop was to share the experiences and ideas of the teachers. ICT become more and more important in all professional activity and ePrep implicitly tries to develop this new reality and culture of sharing among the teachers through the organization of activities, projects, workshops, etc., in the Technology-enhanced Learning domain.

The ePrep community of interest is currently composed of more than 1000 members, 150-200 of whom frequently participate in the activities and 30-40 are active members of the ePrep CoP. Regarding the diversity of the CoP members, the coordinator of the CoP (who is the teacher in Physics mentioned above, today director of ePrep) suggests that they are divided into three categories: the teachers in CPGEs or in similar establishments, the teachers-researchers in “Grandes écoles” or at the University, and the representatives of ePrep institutional partners, for example CNED³, INRIA⁴, French Ministry for National Education, etc. This association of individuals coming from a personal social network of the coordinator, and representatives of the institutions, allows ePrep having got a specific configuration. It is through the director of ePrep and the support of partners (European Commission, French Ministry for Education, Conference des grandes écoles, Le Monde de l'éducation, learned societies, etc.) that those persons coming from different contexts and who did not necessarily know each other before met, wanted to collaborate, and currently form a community.

³ Centre National d'Enseignement à Distance (France)

⁴ Institut National de Recherche en Informatique et Automatique (France)

3.2 Step 2: Coalescing

The willingness to collaborate is also related to the sense of belonging mentioned by the participants. Indeed the interviewed members told us how they feel involved in this community because they are directly concerned and easily find their place. In general, they committed in the community for very concrete and personal reasons and interests. They mainly felt concerned by the opportunity to share their professional experiences in order to benefit from new tools to be implemented in their daily practice, and lead projects for the CoP. Of course these projects subsequently allow each participating member to learn and develop his/her professional practices.

The coordinator of the CoP, leads the community by supporting it from the operational and organizational (seminars, trainings, etc.) points of view, fostering communication and collaboration (e.g. through teams-projects), and ensuring the coordination of new members (she plays a facilitation role through the organization of meetings focused on learning and professional development).

3.3 Step 3: Maturing

The birth of the CoP can be understood as a maturation step throughout which ePrep CoP members appropriate tools in order to develop projects: the Wikiprépas project (creation of a Wiki gathering pedagogical articles useful for the whole CPGEs' educational community), the ePrep Francophone Platform project (to propose in free access pedagogical content for CPGEs and similar establishments in France and French-speaking countries), the Pedagogical Innovation project (including the production of multimedia courses), the International Cooperation project (as a transversal project).

At the end of the third ePrep International Workshop (Cergy-Pontoise - France, May 2006), the scientific coordinator of PALETTE, having participated in ePrep initiatives from 2002, suggested to the director of ePrep to create a CoP within ePrep. This 2006 Workshop has been revealing; three important decisions have been made: the organization of annual ePrep thematic seminars (ePrep workshops were organized every two years and participants wanted to meet more often), the creation of the ePrep Steering Committee and Development Committee, and the creation of a CoP in order to form a core group of members to develop projects. From the requests of participants in the workshop, the CoP has been formed during the first ePrep Thematic Seminar (Sousse – Tunisia, October 2006).

At the beginning, the ePrep CoP intended to focus on the tools developed by PALETTE. This has been done tool by tool, associating projects with specific PALETTE tools (SweetWiki for Wikiprépas, Amaya for the Platform, LimSee3 for the Pedagogical Innovation, and e-Logbook to animate the CoP). But at the moment, the CoP begins to use interoperable PALETTE or non-PALETTE tools: for example MediaWiki with a LaTeX implementation, Amaya and LimSee3 with the ePrep Platform, etc.. All the activities have been easily implemented on the basis of the participation and interests of the members and thanks to participative design sessions organized by PALETTE researchers for ePrep CoP members (accounts available online – http://www.eprep.org/researches/palette_en/palette_en.php).

ePrep CoP members were particularly interested in research aspects. For instance, they co-operate with PALETTE researchers in order to analyze the learning experiences they lived inside the CoP. Thus, a member explained how she learnt to download a XML file edited with Amaya on the ePrep platform, another member underlined a discussion between CoP members on the relevance of semantic functionalities in Wikis.

To precise the role of the CoP inside ePrep, the coordinator defines ePrep as based on two “legs”, one leg is related to research developing innovative practices (the CoP composed of 30-40 specialists) and one leg related to the dissemination of the practices (through the ePrep workshops gathering every two years 100-150 participants, and through the ePrep mailing list having more than 1000 contacts).

3.4 Step 4: Stewardship

After the step of maturing, the community can go through cycles of high or low activity level. According to the CoP members’ answers to the questionnaires the thematic seminars are an important way for allowing the members to know each other, share issues, present various projects, and mainly experience what being a member of a community is. For example, at the second ePrep Thematic Seminar (Lyon - France, November 2007), the participants had the opportunity to meet in order to take stock of the progress of the projects lead during the last year with PALETTE.

The answers to the questionnaires show that, despite the opportunities to share, the feeling of mutual recognition is weak because of the little number of active participants and relatively rare face-to-face meetings. Even if the participants do not meet outside the ePrep meetings, the projects develop anyway in a harmonious climate. The good relations are thus essential because their discussions lead the emergence of the projects and choices of tools.

Through the ePrep activities, the participants can explore new practices and cooperative tools as well as integrating them into their practice. The participants do not only acquire knowledge but they also participate in the CoP projects, lead activities, and experiment new practices.

Following (Wenger et al., 2002), learning leads practice and practice is the memory of learning. In this connection, the coordinator thinks that inside the CoP, the activities allow changing participants practice by fostering reflections about possible pedagogical practices integrating innovative tools and experiencing activities and projects in which these new tools are implemented.

3.5 Step 5: Transformation

The transformation of a community is necessary and is done naturally. The community can live important changes, towards opening or closing. If it opens its frontiers, the CoP can lose members and forget its main objective. On the contrary, if it restricts its domain of activity, the CoP members can lose their interest (Wenger, McDermott & Snyder, 2002).

The young ePrep CoP will probably discover this transformation phase in a near future. In fact, at the end of 2008, after having developed its projects in an exploratory way, the ePrep CoP proposed to the ePrep Steering Committee to develop them in an operational way, in association with the CPGE² teachers' associations. Unfortunately, the new practices developed inside the CoP (collaborative edition of pedagogical content on Wikiprépas, free access for all to courses uploaded on the ePrep francophone platform) were shared by a few number of CPGE teachers, and their associations were not ready to be involved. To follow-up the projects, ePrep CoP members decided, at the beginning of 2009, to develop in an operational way the francophone part of these projects, in response to a call of the International Organization for French-speaking areas. Doing that, they hope to show an interesting way to develop and disseminate the "good practices" they are building.

3.6 Conclusion and Perspectives

Through the five steps of development of a CoP, we could situate the ePrep CoP between the steps "Maturing" and "Stewardship" while having strong basis for the next step "Transformation". It looks sufficiently strong and structured to continue but have not yet the energy and potential visibility that it could develop.

4 Propitious Conditions for Emergence of CoPs

As a synthesis of the short monograph provided above, we highlight four conditions that, from the ePrep members' point of view, seem to be important for the CoP to emerge and for the members to feel to belong to the group. It is not surprising to notice that these conditions are in line with the literature about the emergence of CoPs (CEFRIO, 2005; Lesser et al., 2000; Wenger et al., 2002) and learning networks (Bottino, 2007). As we found out through our analysis of the emergence of the ePrep CoP, definition of a clear purpose, organization of activities that foster participation, common use of tools and services, and moderation are important for supporting the emergence of a CoP. In this section, we argue this point of view and suggest some guidelines in order to inform the creation of a CoP. As Bos-Ciussi, Augier & Rosner (2008) state "communities are not mushrooms" and need favourable conditions to emerge. The proposals we list here below are conditions for a possible creation and "cultivation" of a CoP. We insist on the term "proposals". Indeed we suggest conditions and actions on the basis of the analysis of a CoP that emerged in a very specific context: French teachers especially from scientific and engineering higher education domains, worldwide organization and network of schools, clear aim to use web-based technologies for connecting people, great personal and professional involvement of the coordinator. It is important to mention that this context of emergence is probably very different from, for example, the context of companies that create CoPs with a clear aim of return on investment and making individuals collaborating, negotiating common objectives and ground, and creating common sense of belonging to the company. The aims and context of such CoPs are of course

very different from the ePrep context. However, we believe that the proposals we list below can be of interest for various CoPs. We suggest to the reader to consider them with his/her own “context glasses” and to read them with the objective of finding relevant ideas for his/her own CoP.

4.1 Purpose and Domain

First, the CoP has to precisely define its purpose and domain, to know what it is about and what the concrete objectives of its members are. In the ePrep CoP, in order to propose activities that are in close relation with the members’ objectives, a dedicated committee has been created. In addition, the fact that researchers and developers have supported the ePrep CoP towards its emergence, definition of activities, etc. These conditions were ideal in this case. However, for other CoPs to emerge, it is imaginable to ask external support, at least at the beginning in the form of consultancy, technical support or specific coordination. For a CoP that emerges in an organizational context, this external support can be of crucial interest in order to coordinate the goals of the organization with those of the CoP and define human, technical and financial resources that could be attributed to the CoP.

The purpose and domain should not necessarily be clearly defined at the very beginning. They could be discussed and negotiated with the members or a focus group of interested members. Discussion and negotiation allow members to know each other and find meaning to group together (Wenger, 1998). If the CoP members are distributed among several locations, it is also a good opportunity to test synchronous or asynchronous communication technologies.

Finally, the definition of the CoP objectives and domain is also related to the identification of the target audience of the CoP: who will be the “typical” member of the CoP? This question often informs the definition of the CoP purpose. In the ePrep CoP, the target audience is composed of teachers who aim at sharing their pedagogical questions and resources as well as developing common course materials. Hence, the purpose, the activities, the tools used, etc. were all focused on them.

4.2 Activities

Second, the first activities of ePrep CoP are short, i.e. with objectives, scenario and scope that the coordinator can easily control. The activities also lead to concrete outcomes that are directly related to daily practices of members. In the ePrep CoP, course contents have been shared through online platforms.

Hence, by “activities”, we do not necessarily think to “organized activities” with specific tasks that members should complete. We rather follow Henri & Pudelko (2003, p. 483) who note that: [The community of practice emerges from collective activity. It does not constitute an aim in itself but is the result of the involvement of individuals in the actions of professional practice. For each individual, the virtual community of practice represents a means of investing themselves in the social or professional definition of their trade, to reinforce their professional identity, to enrich or perfect their daily practice while contributing to the practice of the community.]

By following the advices of different authors (Bottino, 2007, CEFRIO, 2005; Wenger et al., 2002) and considering some of the activities organized in the CoP we have observed, we can suggest some actions to carry out for supporting the emergence of a CoP:

- Write members' yellow pages so that each participant could present oneself, one's interest, personal objectives and specific background and competencies.
- Train members together to the use of technologies. This concerns both the technologies used to communicate and collaborate and the technologies used to produce common resources. The negotiation of the meaning of the use of tools within the CoP is important for avoiding possible frustration due to lack of technical mastery of technology or possible feeling of members to be "off" the group because of technical issues.
- Consider the possibility to organise training or meetings on a face-to-face mode. In the first months of the CoP, it can be worth developing real and visual ties between the participants. During these events, it is important to value the competencies of the individual members within the community by asking some of them to present their practice, or by proposing them to share the coordination job (to update a website, write meeting accounts, prepare events, etc.).
- Let members to propose activities or topics to discuss. This will necessarily lead to an involvement of the members in finding ideas and discussing issues regarding the development of the CoP. In addition, the coordinator has probably to take care of the less active members by keeping personal contacts with them.

In the ePrep CoP, these activities lead the first members to feel to belong to a group who shares common interest and actions.

4.3 Tools

Third, tools seem to be secondary. In the observed community, the tools only serve concrete objectives and activities. In other words, they are chosen once the objectives have been defined. The members take care to choose tools that are either already used by most of them or easy to integrate in their usual technical environment. In addition, their use is directly integrated into activities, i.e. appropriated by the members in order to support tasks. In a sense, the members like to not care about the tools; a good tool could be viewed as an "invisible" tool. But to become "invisible", a tool has to be appropriated by the group. This appropriation occurs through common training, as already said, but also through discussion and negotiation. This allows developing new uses of old tools or inventing new activities in order to achieve the objectives of the CoP.

Another very interesting activity to organize at the phase of emergence of a CoP is a survey among the members about their individual mastery of technologies and preferences in use of tools. This survey can take the form of a checklist of actions to perform with technologies. It can also be a list of open questions in order to let the members tell how they usually use technologies in order to achieve specific tasks.

4.4 Moderation and Coordination

Fourth, the roles of the coordinators are crucial for launching the first activities and make the community growing (Wenger, McDermott & Snyder, 2002; Daele, 2006): they synthesize discussions, propose objectives and activities, test different tools, communicate with external environment and partners, make connection between the members, foster participation, etc. In the ePrep CoP, the coordinator has played an important role as leader and “energizer” of activities and development of uses of tools. She also played a role as “member” and user of tools: she was deeply involved in the activities of producing and sharing resources among the members. She also played a role as “mediator” between the PALETTE researchers and developers and the CoP members.

A new CoP moderator has not necessarily to take all these roles in charge. They can be possibly shared between the members of a coordination team. This then requires discussion and negotiation of tasks. As Wenger, McDermott & Snyder (2002) state, a CoP coordinator plays roles regarding the three main components of a CoP: domain, community and practice.

- Regarding the domain of the CoP, the coordinator identifies the existing networks in the professional area, gathers professionals on a common practical issue or project (at least at the beginning), recruits new members, etc.
- Regarding the community itself and its dynamics, the coordinator welcomes the participants, identifies the potential leaders and possible co-coordinators, proposes internal rules, creates a pace in the activities, etc.
- Regarding the development of a common professional practice, the coordinator helps formalizing individual practices, finds resources, documents the shared practices, etc.

5 Conclusion

As the ePrep CoP is a young community of practice, our study particularly focused on the Wenger, McDermott and Snyder’s first steps of the life of CoPs: potential, coalescing, maturing. We observed how a first community of interest has been created in the ICT for education domain, gathering French and francophone teachers wanting to share their professional experiences and to lead projects for enlarging the access to the French “Grandes écoles”, and how a core group of these teachers emerged as a real community of practice with the support of the PALETTE European project. It was particularly interesting for us to analyze the emergence of the CoP activities linked to the use of new collaborative tools, under the guidance of the CoP coordinator, deeply involved in the activities and user of tools herself, and mediator between the CoP and PALETTE.

This observation and analysis allowed us to highlight four conditions for emergence of CoPs, related to:

- purpose and domain: not necessarily clearly defined at the very beginning, but discussed and negotiated with the members, possibly with an external support;

- collective activities: result of the involvement of individuals in actions related to their professional practice;
- tools: becoming, when appropriated by the group, “invisible” tools serving concrete objectives and activities;
- moderation and coordination: crucial issues for launching the first activities and make the community growing, and preferably shared between the members of a coordination team.

Our first observations regarding the further steps of the Wenger, McDermott and Snyder’s model applied to the ePrep CoP - stewardship and transformation - let us think that the CoP looks sufficiently strong and structured to continue. It would be interesting to verify this prediction in a few months, when the CoP will succeed or not in involving more and more CPGE teachers in its sharable and reusable document production practices.

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