An Example of Participatory Design Methodology in a Project which Aims at Developing Individual and Organisational Learning in Communities of Practice

Amaury Daele, Université de Fribourg, amaury.daele@unifr.ch

Martin Erpicum, Université de Liège, martin.erpicum@ulg.ac.be

Liliane Esnault, EM Lyon, esnault@em-lyon.com

Fabienne Pironet, Université de Liège, fabienne.pironet@ulg.ac.be

Hervé Platteaux, Université de Fribourg, herve.platteaux@unifr.ch

Etienne Vandeput, Université de Liège, evandeput@ulg.ac.be

Nathalie Van de Wiele, ePrep, nathalie.vandewiele@eprep.org

Abstract.

The experience described in this paper is being developed in the framework of the PALETTE[1] project by two teams of researchers involved in collecting information from some Communities of practice[2] (CoPs) then in providing this information through suitable formats to their technical partners in the aim of designing an interoperable and extensible set of innovative services and specific scenarios to be implemented and validated in CoPs of diverse context (teaching, management and engineering domains). The aim of our paper is to describe and analyse the methodology created and applied to support this process.

Implementing a Participatory Interview Process

The participatory design process for the whole project was implemented following an Actor-Network Theory (ANT) [Latour, 1999; Monteiro, 2000] driven perspective. The main idea of the early stages of this process is the enrolment, though participatory activities, of actors of different kind, according to ANT –meaning human actor such as CoPs' members, CoPs' observers, etc; and non-human actors such as the inter-

[1] PALETTE (Pedagogically sustained Adaptive Learning Through the exploitation of Tacit and Explicit knowledge) is an 'Integrated Project' supported by the European Commission (DG Information Society and Media).

[2] "Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly". "Because its constituent terms specify each other, the term "community of practice" should be viewed as a unit" (Wenger, 1998, p72).

view process, the interview guide, the methodological tool for collecting and retrieving the data and the technical tools used for the interviews, for example – in order to settle the collaborative process necessary to collect useful data for the project.

The role of our two researchers teams, a CoPs' observers team and a Data condensation team, as actors of the participatory design process for the whole project, is depicted in the MOT schema below (see Fig.1).

The project has decided to work not only with previous knowledge or report from previous research on CoPs, but also with a number of existing CoPs (about a dozen). These existing CoPs, more or less formalised as such at the start of the project, are not members of the project, but are more considered as a "field of experiment". It is thus important to explore how the project could meet their own interests so that at least some members would be able to spend time with project members answering to interviews. This was the first role of the CoPs' observers' team. CoPs' observers are members of the project; they are the "correspondents" of the CoPs within the project and the "referring people" for other partners within the project when they need information about CoPs. They are also the key people regarding the design and implementation of the interview process.

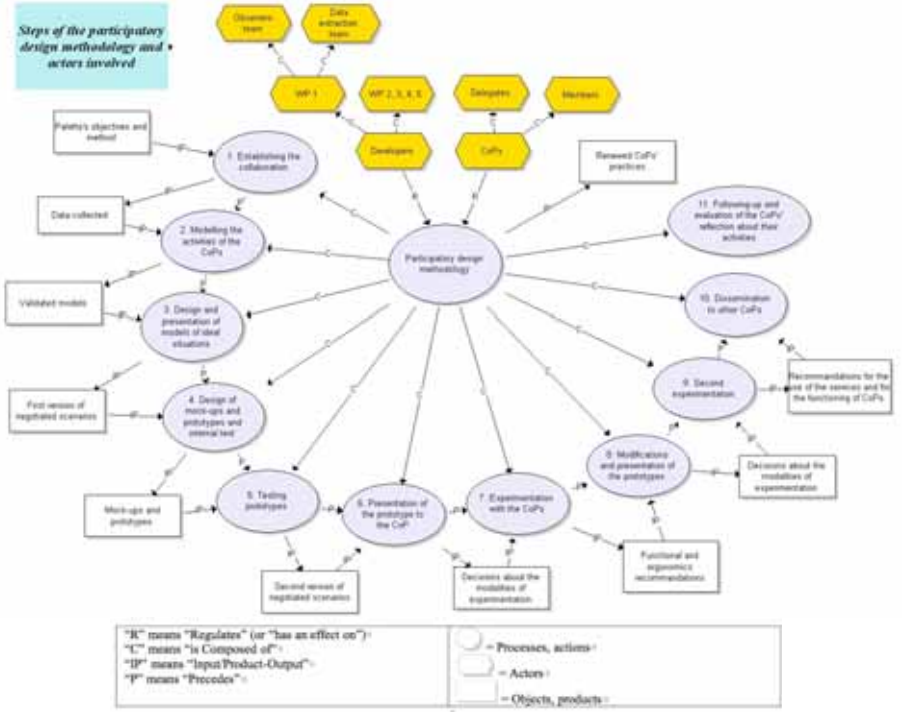

Fig. 1. PALETTE process of Participatory design methodology (MOT schema created by the PALETTE researchers : B. Charlier, F. Henri, A. Daele, M. Künzel)

The Role of the CoPs' Observers Team

The first step of enrolment was thus the one of CoPs' observers through two activities: their participation in designing the research methodology, and noticeably the interview guide and the collect of some knowledge about the CoPs involved through project members that had already some contact with these CoPs. The interview guide was thus constructed as a boundary object [Bowker and Star, 1999] between the project workgroup in charge of this part and the CoPs observers (see Table 1).

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Table 1. Table of content of the Interview guide

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Table 2. Table of content of the Methodology reference document

This interview guide was created using recommendations by Miles & Huberman (2003), with different issues (origin of the CoP, knowledge about the CoPs members, organization...) and a special attention towards software tools that CoPs are using or may need in their everyday life activities. Some general guidelines have also been provided in a Methodology reference document (see Table 2).

The Role of the Data Condensation Team

The second step of enrolment was the one of the project technical partners, who had to be willing to recognise the scientific value of the participatory design methodology and who were also included in the choice of the collaborative representation tool for the data. The MOT+ software is thus a provider of boundary objects between the work group in charge of collecting the CoPs data and the technical workgroups who are developing the tools.

The Data condensation team has started his work from the interviews and, by way of examples, they have proposed different kinds of data representations to our technical partners for their comments and potential proposals in what the follow-up of the process concern. They have managed like a MOT diagrams and vignettes (text format).

Our technical partners agreed on the five following data formats of interviews and other techniques: the audio record, the minutes by minutes timing, synthesis, MOT diagrams (on specific requests), retranscription of some audio records (specifically for KM services). They also add precisions about their requirements and priorities for the information to be treated by the CoPs' observers team and the Data condensation team.

Some Important Participatory Activities

The interview process by itself is done following several participatory activities:

- the interview by itself is a face-to-face process, involving two CoPs' observers and one or several CoPs' members; technically, the interview is registered as an audio file through a dedicated software; the interview guide is mainly here to remind the interviewers about the categorisation process of the data collection methodology
- the transcription of the interview at two level: one as a "minutes report", enlightening the correspondence between the questions in the interview and the minutes where to find related material (see Table 3); and some more elaborate transcriptions, with more content, organised according to a pre-categorisation process;
- the validation by the interviewee CoPs' members of the transcriptions;
- other data may be extracted from interviews in the form of "vignettes" (small stories), illustrating some typical examples of the CoP's life; such vignettes are written buy the interviewers and also validated by the interviewees.

The interviews transcriptions are thus boundary objects between the CoPs, the CoPs' observers' community and the project workgroup in charge of data collecting.

Name of the CoP : [redacted] a community of learners made up of 21 members : 15 teachers and 6 learners

Name and role of the interviewee [redacted] pedagogical manager, moderator, responsible for access and planning - and [redacted] from 01:22:20 to 01:31:27) - a learner

Language of interview : French

Date of interview : 09-05-2006

Name of the observers : Martin Erpicum (ULg) - Nathalie Van de Wiele (ePrep)

Author of the minutes: Nathalie Van de Wiele

Email : nathalie.vandewiele@eprep.org

Other documents collected about the CoP :

- [redacted]

URL of tools/documents used by the CoP :

- [redacted]

File : BADGE-CGE.mpp (1:59:00)

00:00:00	Presentation of Palette's objectives by the observers
00:01:06	Bruno presents himself (involved in continuing education and in data networks)
00:01:36	History of the CoP (a [redacted] created to provide a training suitable for working people)
00:02:10	The begining of the CoP (tools specifications, choice of a platform)
00:04:05	Training schema for [redacted] face-to-face intensive courses (with multimedia CD-Roms and paper documents) for 3 days a month and online courses
00:04:55	Characteristics required for the platform, choice of Telje
00:05:26	Duration of the training (6 months per CES, mixing practical training and conducting projects)
00:06:10	About the [redacted] n (specialized master - M2/D1 - for people having a L2 diploma plus 03 years of experience - the diploma is obtained in 2 or 3 years with 2 CES in 3 domains and is validated [redacted] conducted in 1 year)
00:10:30	About parity (only one woman for 6 learners)
00:11:58	The interactivity between the learners (they come from different parts of France or North Africa, with an almost similar background, with the same aim : to obtain the [redacted]a)
00:14:10	How the CoP communicates to have new enrolled learner members (through workshops, press, Telecom Companies)
00:16:00	Creation of micro-communities (2 or 3 learners) inside the CoP for conducting projects (these projects are proposed by the teachers)
00:17:24	A first tool for this CoP : Telje (history of Telje - for Maribeth countries ; specifications : 1-for online courses, 2 for tests in limited time and corrections, 3-for interactive meetings - audio-meetings)

Table 3. An example of a minute by minute timing of an interview

The next step is the translation of audio and text data and their inscription (translation-inscription process in the meaning of ANT, see for example [Law, 1992] and [Callon, 1999]) into MOT+ schemata available for the whole project community, and especially the technical partners (see Fig.2). The MOT+ representation may also be sent back to CoPs' members, with comments, if they are interested.

Conclusion and Further Research

From a practical point of view, our experience could be used as a model by people who must, collaboratively and at a distance, understand and improve how CoPs act.. However, we have to be aware of two possible bias related to the status and involvement of the interviewees : the representativeness of the choosen CoPs and the status of the interviewed people inside the CoP to arrive to an understanding of the CoP functioning as realistic as possible.

With the information that was gathered yet, one CoP activity process (see graphical representation) gives a first idea of the services that could be further developed by PALETTE: technical services (how to produce reusable documents, how to annotate a document in an appropriate way) as well as pedagogical services (how to develop strategies that will make students more at ease for using a forum online), services that should in the end facilitate CoPs life.

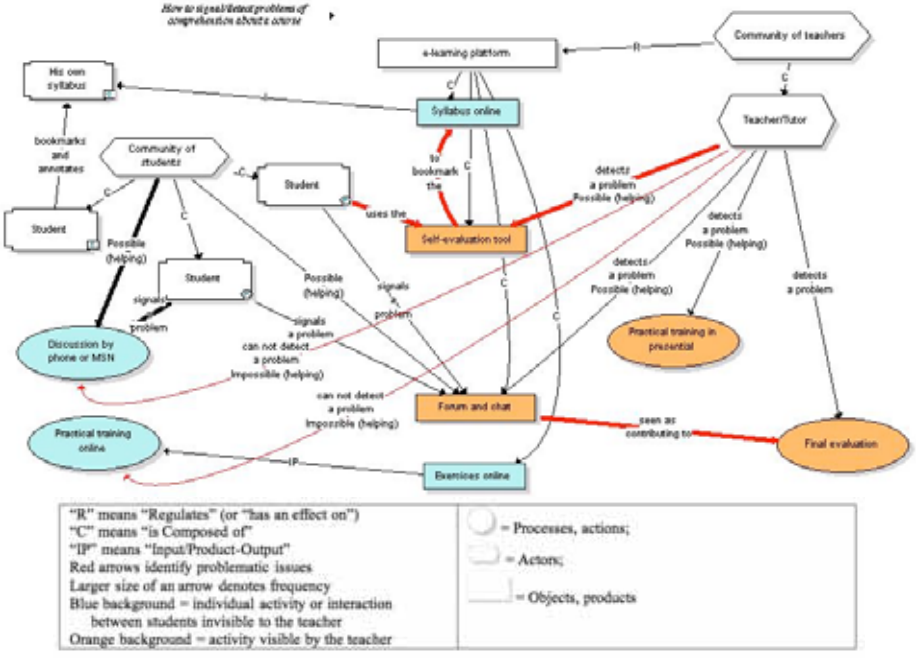

Fig. 2. Graphical representation with MOT+: How to signal/detect problems of comprehension about a course in TE CoP?

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