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PALETTE

Pedagogically sustained Adaptive LEarning Through the exploitation of Tacit and Explicit knowledge

Instrument: Integrated Project

Thematic Priority: Technology-enhanced learning

D.PAR.06 – Learning and Organisational Resources: Conceptual Instruments for Self-Analysis, Learning and Developments of CoPs

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Summary
The purpose of this deliverable is to present the researches that have been led for modelling learning and activities in CoPs. On the basis of these models, we developed Learning and Organisational Resources (LORs) that are short activity scenarios aiming at developing learning, collaboration and uses of technological services in CoPs. The LORs are especially focused on the Generic Scenarios developed by WP5 and presented in D.IMP.08 i.e. 'Reification', 'Debate & Decide', and 'Identity building'. The LORs have been trialled and evaluated by CoPs. In the conclusions, we synthesize the evaluation accounts from the CoPs and we provide advices for the use of the LORs by CoPs from various domains and contexts.

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1 – Foreword: general introduction to D.IMP.08, D.PAR.08 and D.PAR.06

At the end of the PALETTE project, different WP1 and WP5 objectives and tasks converge. This convergence is made concrete by three deliverables:
- D.IMP.08: Instances of Implementation of PALETTE Scenarios
- D.PAR.08: Analysis of Instrumental Genesis Lived by the CoPs
- D.PAR.06: Learning and Organisational Resources: Conceptual Instruments for Self-Analysis, Learning and Developments of CoPs

Each of these deliverables tackles a common issue from a different point of view. Indeed, the main issue at the end of the project is not only to report what has been done with the CoPs we have collaborated with but also to propose consistent analysis and guidelines for other CoPs and stakeholders involved in various domains and interested in CoPs issues. The challenge here is to provide the reader with a more general and analytic view of the PALETTE outcomes that could be used in other situations by other stakeholders. In other words, at the end of the project, we have to switch from activities, analysis and development of 'specific' CoPs to a more 'generic' approach. This is both related to the scientific objectives of PALETTE (supporting CoP development and the CoP members' learning) and expected impacts of the project for organisations and society, as precised in the DoW (pp. 4-8).

In D.IMP.03 ("Revised Specifications of Services and Guidelines for Services Orchestration", May 2007), we introduced and defined the difference between 'specific' scenarios for CoPs (i.e. scenarios answering specific needs of CoPs) and 'generic' ones (i.e. scenarios answering similar needs of various CoPs). This distinction then informed the writing of the D.PAR.03 ("Descriptions of 6 Scenarios and of the Results of 6 Validated Trials", July 2007) and the organisation of the second half of the project with multi-disciplinary teams and CoPs. In D.IMP.05 ("First Version of PALETTE Integration: Conceptual and Technical Integration", January 2008), we set up a methodology for developing and validating Generic Scenarios. We also identified three such scenarios derived from the specific scenarios of the CoPs we are collaborating with and organised working teams for designing, developing and implementing each of them:
- 'Reification' scenario that is related to the production, enrichment, search for, and reuse of CoP resources;
- 'Debate and Decide' scenario that is related to debating and arguing about an issue and collaborating for decision making;
- 'CoP identity building and animation' scenario that is related to the management of CoP activities and the resulting development of CoP identity.

Even if they lead to the development and implementation of characteristic activities and services for CoPs, these three generic scenarios are strongly interrelated. According to Wenger's theory (Wenger, 1998), reification and participation are two processes at the heart of a CoP. Following this author, there is no practice reification without members' participation and conversely. The articulation of reification and participation lead to 'negotiation of meaning' within a CoP: the members discuss the meaning of their practices, views, ideas, vocabulary, etc. and so highlight the way they experience their domain of activity. The outcome of this discussion is a progressive definition of the CoP identity: it is through negotiation that the CoP members can define their objectives and specific domain regarding other external groups. It is also on the basis of this identity that the CoP will continue to evolve, organise further activities, and recruit new members.

In the introduction of the third PALETTE implementation plan, we have introduced the relations between D.PAR.08 and D.IMP.08 summarized on the figure below.

Step 1:
CoP mediators summarise CoP activities according to specific scenarios
Each team propose an instantiated scenario of its generic scenario
Consensus on the alignment between CoP activities and instantiated scenarios
Outputs:
- Description of instantiated scenarios validated by CoPs mediators and technical partners
- Implementation plan produced by each team (beginning of the implementation)
- First version of the technical charter
Deadline: 30 May

Review of instantiated scenarios

Beginning of the implementation of instantiated scenarios

Step 2:
On the basis of the produced implementation plans, CoP mediators produce trial scenarios as well as a detailed timing for their organisation
Outputs:
Description of trial scenarios related to each CoP (with a detailed timing)
Deadline: End of May (M 28)

Step 3:
Produce the first version of **implemented** instantiated scenarios (software available)
Outputs:
- First version of **implemented** instantiated scenarios
- Updated version of the technical charter
Deadline: M 30

Beginning of the Trials according to the availability of implemented parts of instantiated scenarios

Step 4:
Feedback on **conducted** trial scenarios
Outputs:
- Feedback on **conducted** trial scenarios
- Updated version of trial scenarios
- Feedback on new services functionalities
Deadline: M 33

Continuing the Implementation of instantiated scenarios and the conduct of trials to collect final feedback

Step 5:
Produce the final version of **implemented** instantiated scenarios
Produce the final version of **conducted** trials scenarios
Outputs:
- Final version of **implemented** instantiated scenarios (D.IMP.08)
- Final version of **conducted** trials scenarios (D.PAR.08)
- Final version of the technical charter
Deadline: M 34

Figure 1 – Summary of the relation between D.PAR.08 and D.IMP.08.

D.IMP.08 is about the technical implementation of the generic scenarios and their instantiations. D.PAR.08 is about how the specific scenarios have been conducted with each CoP and what the analysis of these trials shows about the appropriation of the services by the CoPs and the changes that occurred within them. In addition, the D.PAR.08 provides a cross-case analysis highlighting the conditions of use of the PALETTE services in the trials. This cross-case analysis will be useful for external CoPs that are interested in more generic considerations on the use of PALETTE services.

In addition to these two central deliverables, the D.PAR.06 describes the development and trial of Learning and Organisational Resources (LORs) that aim at providing the CoPs with concrete scenarios of activities for members' learning, activities organisation and choice of tools.

Regarding the implementation of the PALETTE Participatory Design Methodology, these three deliverables highlight:
- How the PALETTE services met CoP specific needs;
- How the CoP developed through the use of the PALETTE services;
- How the PALETTE services evolved and changed through the collaboration with CoP members;
- How other CoPs and stakeholders could benefit from the experience of PALETTE designers and CoPs.

In parallel to these three deliverables, D.EVA.06 (January 2009) adopts a global and critical point of view and describes PALETTE methodology and main outcomes regarding the project main objectives and expected impacts.

2 – Introduction to D.PAR.06

This deliverable is the outcome of the WP1 task 5 "Learning and development in CoPs" that began at M13. The purpose of this task was to develop a comprehensive model of learning within CoPs. This model has then been used for informing the analysis and understanding of CoP learning and activities. It has also been used as a basis for designing and trialling Learning and Organisational Resources (LORs) for those involved in CoPs. To achieve this goal and produce these resources, we first carried out a phenomenographic research. The results have been used for proposing specific learning activities to the CoPs we were collaborating with. The CoPs have then participated in the validation and improvement of these activities.

This deliverable is related to other deliverables and tasks in WP1 and other PALETTE WPs. First, it is based on the transversal analysis of the first data generated about the CoPs objectives and functioning at the very beginning of PALETTE (see D.PAR.01). It is also based on the analysis and categorization of CoPs needs reported in D.IMP.03. These analyses led to the development of a model of CoP activities (Künzel, Charlier, & Daele, 2007). Second, the validation of the learning and organisational resources we produced is based on the evaluation questions proposed by WP6 in D.EVA.02. Third, the learning and organisational resources for CoPs are closely related to the development and implementation of the generic scenarios (D.IMP.08 and D.PAR.08). Fourth, the produced resources for CoPs will be disseminated following the PALETTE exploitation plan prepared by WP7 (D.DIS.12).

The structure of the deliverable is as follows:
- The part 3, based on a paper of Ashwin & Daele (2008), presents the phenomenographic research that led to the development and exploitation of a model of learning in CoP.
- The part 4, based on papers of Künzel et al. (2007) and Barlatier, Vidou, Jacquemart, & Latour (2007), presents how we modelled the activities of CoPs.
- On the basis of the two previous sections, the part 5 develops how we designed Learning and Organisational Resources (LORs) for CoPs. Three types of LORs are then presented.
- In the part 6, the methodology followed for trialling and validating the LORs is presented and the validation process of some LORs trialled with four CoPs is reported.
- Finally, the conclusions provide a synthesis of the contribution of this deliverable as well as guidelines for the WP7 to plan the exploitation of the LORs.

3 – Modelling learning in CoPs

This section is based on a paper presented at the EARLI SIG9 conference in Kristianstad, Sweden in May 2008. In this paper, Ashwin & Daele (2008) presented the first steps of the research led in the framework of WP1 task 5.

We focus here on the development of a model of learning in CoP through a phenomenological approach[1]. The instruments to develop are part of the PALETTE "Learning and Organisational Resources" which aim at supporting CoPs for defining their needs of development and supporting their members' learning, and at assisting them in the choice, appropriation, and adaptation of technological services.

3.1   Methodology

In order to collaboratively develop and elaborate the model of learning and professional development in CoPs, we designed an approach that uses a collective phenomenographic (Marton & Booth, 1997) analysis of CoP members' accounts of actual learning experience within their CoPs. We take "learning experience" in a wide sense. Their learning may occur during an "event" (activity, training, etc.) or more informally, for example through discussions with other CoP members.

We followed the process described below:
1. Researchers asked individual members of their CoPs to describe an actual situation in which their involvement in their CoP led to the development of their professional knowledge in some way. Some questions suggested to the researchers are included in Appendix 1 (p. 67). These questions could either be asked in a face-to-face interview or in an email conversation. Where the situation described involved written exchanges (for example via email discussions or an on-line forum) that the researcher had access to, these have be included to supplement the CoP members' accounts. This process has initially been piloted with a small number of accounts in order to validate the approach. Then all the researchers collected learning accounts.
2. For each account, the researchers, where necessary, translated the account into English and provided information on the names and contact details of the CoP member involved. Due to the work involved in collecting and translating the accounts, we suggested a maximum of three accounts from each CoP. 21 accounts have been generated.
   In each case, regardless of the method of elicitation used, the focus was on getting CoP members to describe an account of an actual situation in which they felt they had developed their knowledge within their CoP. This was essential if the interviews were to be suitable for phenomenographic analysis, which is reliant on interviews that (Åkerlind, 2005; Ashwin, 2006; Ashworth & Lucas, 2000; Bowden, 2006; Trigwell, 2006):
   - Focus on specific experience of a phenomenon for an individual;
   - Are fairly open ended and focused on eliciting the meaning of that instance of the phenomenon to the individual;
   - Involve the researcher 'bracketing' their previous experience.
3. The CoP members' accounts and, where appropriate, the extracts of the written exchanges, have been circulated to all of the task partners. Each partner undertook an initial analysis of the accounts and extracts and attempted to identify the qualitative differences in the types of learning taking place in the accounts (a common guide has been provided for this, see Appendix 2, p. 67).

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[1] "Traditionally, the object of study of phenomenographic research has been described as variation in human meaning, understanding, conceptions (Marton, 1981) or, more recently, awareness or ways of experiencing a particular phenomenon (Marton & Booth, 1997). Outcomes are represented analytically as a number of qualitatively different meanings or ways of experiencing the phenomenon (called 'categories of description' to distinguish the empirically interpreted category from the hypothetical experience that it represents), but also including the structural relationships linking these different ways of experiencing. These relationships represent the structure of the 'outcome space', in terms of providing an elucidation of relations between different ways of experiencing the one phenomenon." (Åkerlind, 2005, p. 322).

4. The task partners met to share their initial analysis of the accounts and to develop a model of learning and professional development based on their analysis of the qualitative differences in the types of learning activities occurring in the extracts.
5. During this discussion, the tasks partners also identified whether they needed to collect further data from the CoP members whose accounts had been analysed or possibly new accounts. It has been decided to collect some new accounts specifically from experienced CoP members.
6. The researchers contacted the CoP members and collected the data. Five new accounts have been generated. These have been circulated to the other researchers.
7. The researchers met to revise the model on the basis of the new data. Then, several email discussions occurred for revising the model.
8. On the basis of the final model, an iterative process occurred. The different versions of the model informed us to generate different versions of resources to validate with the CoPs.
9. The instruments have then been validated with selected CoPs and further amended based on this validation.

3.2 Results

The objective of the outcome space is to describe the qualitative variation in the way that CoP members experience learning in CoPs, or, in other terms, to describe the differences in the meanings that CoP members assign to learning events/experience.

At a face-to-face meeting, the researchers discussed the *qualitative variation* in the accounts of learning generated from the different CoPs. After an initial discussion of the data, it was agreed to focus on the qualitative variation in three aspects of the CoPs:
1. Qualitative differences in the reasons that CoP members had for participating and engaging in their CoPs;
2. Qualitative differences in perceptions of CoP processes;
3. Qualitative differences in perceptions of learning outcomes from CoPs.

This resulted in the differences set out in table below being identified by the researchers:

Differences in reasons for participation and engaging in a CoP	Differences in perception of CoP processes	Differences in perceptions of learning outcomes
- consolidating practice (reassure existing practice or gain new practice) *vs* challenging practice (to confront it) - evaluation *vs* no evaluation (=no judgement from the others) of individual practices - to meet people (socialize) *vs* to share objects, documents, etc. - explicit knowledge objective *vs* implicit knowledge objective	Learning occurs: - through planned *vs* unplanned events - through formal *vs* informal situations - when expected *vs* unexpected - through distributed *vs* dyadic *vs* individual reflections/discussions - through face-to-face *vs* distant - through direct *vs* indirect participation of the member - from peers *vs* from experts	- learning about oneself (my practice, skills, knowledge, etc.) *vs* about others - addition of knowledge (assimilation) *vs* change in the structure of thinking or doing (accommodation) - change in thinking (embrained) *vs* change in doing (embodied) - individual *vs* collective *vs* no reification - outcomes are expected *vs* unexpected

Table 1 – Initial analysis of the qualitative variation in CoP members' accounts of knowledge development within their CoPs

Following the meeting, we re-examined the learning accounts to find extracts that illustrated the variation that was identified in table 1. Then, by iterating between the qualitative variation identified in table 1 and the identified quotes, we attempted to set out a structure for the qualitative variation that

had the following characteristics (in line with phenomenographic approaches to data analysis, see Åkerlind, 2005; Ashwin, 2006; Ashworth & Lucas, 2000; Bowden, 2006; Trigwell, 2006):

1. There was an inclusive hierarchical relation between the categories of description within each of the columns of table 1.
2. The smallest number of categories of description was used within each column, in order to describe the qualitative variation constituted.
3. There was a clear relation between each of the columns in table 1.
4. The variation between the categories of description was supported by the accounts of CoP members.

Based on this the following outcome space was developed:

Variation in reasons for participating in CoPs	Variation in perceptions of how learning occurs in CoPs	Variation in outcomes
1. To gain information about the domain of the CoP 2. To gain an insight into the knowledge/practices of others; 3. To share or exchange knowledge/practices; 4. To change individual knowledge/practices; 5. To change communal knowledge/practices.	1. Individual knowledge/practices are developed by learning from experts; 2. Individual knowledge/practices are developed by learning from others; 3. Individual knowledge/practices are developed by participating in collective activities; 4. Communal knowledge/practices are developed by participating in collective activities.	1. Individual Information; 2. Consolidation of individual knowledge; 3a. Change in individual knowledge/practices; 3b. Consolidation of communal knowledge/practices 4. Change in communal knowledge/practices. 5. Change in practices outside the CoP

Table 2 – Analysis of the qualitative variation in CoP members' accounts of knowledge development within their CoPs

Following discussions between the researchers on the table 2, more specific outcome spaces related to learning in CoPs were proposed. They are generated through variation across two axes: a referential axis (which focuses on the meaning of the categories) and a structural axis (which focuses on what is in the foreground and background of each category).

3.2.1 Variation in reasons for participating in CoPs

1. To gain information about the domain of the CoP
2. To gain an insight into the knowledge/practices of others;
3. To share or exchange knowledge/practices;
4. To change individual knowledge/practices;
5. To change communal knowledge/practices.

As illustrations, here are some excerpts from transcripts of interviews. For example, the experience of a member of CoPeL comes within the first category: "*For me that was really the occasion to acquaint myself with what's going on, whatever the different training methodologies, in the sense of, I mean, I needed to acquaint myself with what existed, about every mean to do training courses*". Another member of CoPeL aimed at exchanging practices with other members: "*The main objectives were the exchanges of practices, trainings realisation, e-learning trainings conception and animation to exchange as much as possible knowledge and know-how, as tutor, for example. It is mainly about all these elements... mainly exchanges with other members who also develop e-learning trainings*". This corresponds to the third category. Another member expressed her willingness to "evolve" thanks to feedbacks from other members: "*My objective is also to present what I've done, my work, and to get in*

return some critical comments that could make my work, my reasoning evolve". This corresponds to the fourth category.

Table 3 illustrates the structural and referential aspects of the variation in reasons for participating in a CoP. The structural variation focuses on what is in the foreground of the conception. This shifts from a focus on information about the CoP domain, to a focus on individual knowledge and/or practices, to a focus on communal knowledge and/or practices. This represents an inclusive hierarchy because a focus on communal knowledge/practices includes a focus on individual knowledge/practices and information about the CoP domain. However, information about the CoP domain does not include a focus on individual or communal knowledge practices. The referential aspect of variation focuses on the meaning of a conception. In table 3 this shifts from a focus on receiving, to a focus on sharing, to a focus on changing. Again this represents an inclusive hierarchy.

The numbers in table 3 show how each conception is situated in relation to its structural and referential aspects. For example, conception 1 is focused on *receiving* **information about the CoP Domain**, whereas conception 4 is focused on *changing* **communal knowledge/practices** (text in italics indicating the referential aspect of the variation and text in bold indicating the structural aspects of variation). Table 4 and table 5 can be read in the same way.

	Referential Aspects		
Structural Aspects	*Receive*	*Share*	*Change*
Information about the CoP Domain	1		
Individual knowledge/practices	2	3	4
Communal knowledge/practices			5

Table 3 – The referential and structural aspects of the categories of reasons for engaging in CoPs

3.2.2 Variation in perceptions of how learning occurs in CoPs

1. Individual knowledge/practices are developed by learning from experts;
2. Individual knowledge/practices are developed by learning from others;
3. Individual knowledge/practices are developed by participating in collective activities;
4. Communal knowledge/practices are developed by participating in collective activities.

Members sometimes learn from experts of the domain (first category), as in the following example (from the Doctoral Programme CoP): "*I produced a research paper for my doctorate which was part of a bigger research project being conducted into the student experience. I had not been involved in the prior research, but showed my paper to the reader who was leading the project. He has now invited me to co-write the proposed journal article with him, based on both his research and mine. He is also using the theoretical framework which I used in my research as the framework for the whole paper, and has re-written his analysis around it*". In the CoP Learn-Nett, a member felt to learn through discussions with peers during online discussions organised by the coordination (third category): "*And another thing that I think I've learned or another moment, it was the forum and the questions from the other tutors because anyway, as it was my first experience, I was asking myself questions but I didn't know if it was on time or if because I was too stressed or I had too much expectations, or if they were stupid questions... Anyway I had difficulties to evaluate my questioning, in what extent, so when I read the forum, the other questions that were close to mine, they were answering my own questions, it was very interesting because I could say "ok, I'm in the target, I've got the same kind of questions", so it is reassuring, and that then allows to continue to evolve, you know, regarding the functioning*". Finally, as illustration of the fourth category, we can mention the

example of a teaching nurse involved in the CoP TFT: "*Meeting with colleagues (teachers in a Nurses School) for discussing the structure of the reports that the students write after periods of practice in the field. The meeting is organised with specific activities: exercise of correction of student's reports, discussion on evaluation criteria, and collaborative elaboration of an evaluation scale*". The use of the common evaluation scale can be considered as a communal practice.

The structural and referential aspects of the variation in this outcome space could be expressed in the following form:

	Referential Aspects		
Structural Aspects	*Learning from experts*	*Learning from others*	*Participating in collective activities*
Individual knowledge/practices	1	2	3
Communal knowledge/practices			4

Table 4 – The referential and structural aspects of the categories of perceptions of how learning occurs in CoPs

3.2.3   Variation in outcomes from learning in CoPs

1. Individual Information;
2. Consolidation of individual knowledge;

3a. Change in individual knowledge/practices;	3b. Consolidation of communal knowledge/practices
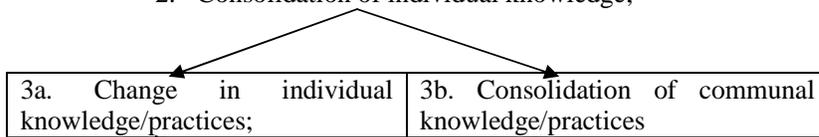
4. Change in communal knowledge/practices.
5. Change in practices outside the CoP

As example of increase of individual information, members of the ePrep CoP explained to have learned how to use the web tools used by their CoP. Regarding the consolidation of individual knowledge, a member of the Doctoral Programme CoP said: "*I am not sure my knowledge or skills have changed. It is more about the fact that I felt more confident in what I was saying, and that I was probably able to communicate it more succinctly. I also found it useful to say that this was something that had been explained to me from an experienced researcher – therefore giving it wider credibility*". The third category suggests that there are individual and communal knowledge and practices that can be changed or consolidated. This shows through in the following example already mentioned earlier. In the CoP TFT, after many discussions on how to evaluate their students, nurses felt to have changed their individual practice of evaluation. But in the same time, they reified together their practices by elaborating a common evaluation framework. Then they produced a document aiming at giving a common frame to their individual evaluation practices. This document could finally be circulated outside the CoP as possible resource for other nurses. Thus, the possible impact of the document created may be considered as an example of the fifth category.

The structural and referential aspects of the variation in this outcome space could be expressed in the following form:

Structural Aspects	Referential Aspects		
	Information	*Consolidation*	*Change*
Personal knowledge/practices	1	2	3a
Communal knowledge/practices		3b	4
Knowledge/practices outside the CoP			5

Table 5 – The referential and structural aspects of the categories of perceptions of learning outcomes from CoPs

Based on this outcome space, we developed 'Learning and Organisational Resources' (LORs) for understanding and evaluating learning of those involved in CoPs. These resources take the form of activity scenarios that moderators or members could set up for situating the learning processes occurring within their CoP and enabling learning.

3.3 Discussion and perspectives

The main objective of our project is to develop useful learning resources for moderators and members of CoPs. From this point of view, the phenomenography approach has been very interesting and conducted to the elaboration of fruitful models of learning. However, we faced some issues regarding the fulfilment of the research:

1. Most of the researchers were not familiar with phenomenography. It is a methodological approach that seems not well known. Especially its epistemological approach is not well known as well as its management in practical terms. In addition, there is practically no literature resource in French on phenomenography while most of the researchers of our team are francophone. To address this issue, we planned a two hours face-to-face presentation of the phenomenography basics with examples of studies. This is certainly too weak for the researchers to appropriate the research approach. A one or two day workshop would have maybe been more appropriate.

2. Our team and the studied CoPs are mainly francophone. This led us to translate transcripts of interviews and other research materials. The translations have maybe conducted to misrepresentations of some texts and thus to loss of sense. To address this issue we organised email discussions for the elaboration of the outcome spaces and debates that occurred. Writing often allows more reflection on what is expressed than oral debates. However, this means the discussion is rather slow and that misunderstandings could not be quickly resolved. We organised two oral meetings in six months, one face-to-face and one online, but more regular videoconference meetings would probably have enabled more debates and reflections.

3. Our team was also international (UK, Belgium, France, Luxembourg, Canada and Switzerland) and multidisciplinary (educational sciences, psychology, information management). Cohesion and agreement are not always easy to reach, even with partners who know each other for a long time. Again, there is a strong need to organise discussions and debates about how to conduct the research and the form of the results and models produced.

4 – Modelling activities of CoPs

The management of CoPs activities represents a central issue for CoPs development in the long term and is therefore a critical concern for CoP moderators, members and stakeholders. Hence, in the framework of this research we propose to develop a model of CoP activities able to provide insights about:

- Organising, developing and evaluating CoP activities;
- Supporting and evaluating learning within a CoP, and;
- Choosing appropriate ICT collaborative solutions, by supporting the conception of scenarios of tools uses.

Despite of the large research literature concerning CoPs, we have not yet noticed the existence of a model depicting the wide variety of CoP activities related either to the CoP main processes (reification, negotiation of meaning, participation, etc.) or to CoP stages of development. So we have chosen to follow up research carried in the framework of the PALETTE where in 2007 a first model was proposed to depict activities and issues of development of a CoP (Künzel et al., 2007). As a consequence, this model has contributed to build the model we propose below. The point here is to reflect about the relevance of modelling CoP activities regarding different dimensions of CoPs: domain, stages of development, objectives, members' characteristics, etc. This reflection could then inform advices to CoPs towards their activity and development. These advices concretely take place in the Learning and Organisational Resources we have developed (see section 5, p. 15).

4.1 The initial activity model

Research and publication concerning CoPs look for instance at the participation in communities (Fuller, H. Hodkinson, P. Hodkinson, & Unwin, 2005), how they operate online (Bourhis, Dubé, & Jacob, 2005), how they build and share knowledge (Klein, Connell, & Meyer, 2005) what contribution they make to knowledge management (Hew & Hara, 2006) and how they are integrated in operations (Bate & Robert, 2002). Others attempt to understand the phenomenon of CoPs in conceptual and definitional terms (Garrety, Robertson, & Badham, 2004). They struggle with the difficulty that CoPs, being a social phenomenon, undergo continuous development (Cox, 2005) and do not conform to conventions. The research today is no longer for a definition of CoPs which is as specific or comprehensive as possible, but rather a sophisticated conceptualisation (Dubé, Bourhis, & Jacob, 2006) providing statements on what types of CoPs there are, what common features, needs and goals they have, and how they get there by analysing their activities. PALETTE has been able to make contributions to this.

The objective of the model is to allow CoP coordinators to map the different activities, which can occur or be organised within the CoP. The CoP activity model proposed below aimed at helping the coordinator to manage, to evaluate and to support individual and collective, formal and informal learning activities as well as the use of the CoP tools by its members. It was expected to be used as a toolbox for decision-making processes.

The first proposed activity model was built on structured interviews conducted with eight CoPs taking part in the PALETTE project (see D.PAR.01). The summary was approved with the CoPs, meaning that we can assume that we recorded them correctly and more or less completely. The initial model we proposed (Künzel et al., 2007) is based on the analysis of the activities of these CoPs and also on the analysis of about 25 CoPs we met in Bern at the CoPs "Dare-to-Share Fair" in January 2007.

Two groups of activities were initially identified. First, activities that were called "projects" by the CoPs themselves including the creation or revision of documents or conducting of smaller evaluations or research projects. This first group of activities is distinguished by a high degree of coordinated sub-activities and by the fact that a goal is explicit. A second group of activities such as a Christmas dinner, going for a drink together or congratulations on a new job can be classified in the "social

activities" category. They are distinguished by the fact that they have nothing to do with the domain, the community's actual interest, have no other explicit goal than to promote community cohesion. There was a problem of delimitation just with these two categories. Some activities within a project are definitely social activities and a joint project also promotes community cohesion.

The third proposed group of activities was more difficult to grasp. These are activities such as distributing information on interesting links or conferences via a mailing list, posing questions and reacting to the answers, making one's own experiences available and discussing them with others, or also making important documents available to other people. These were identified as short-term activities that are communicated with no higher objective or where the objective is inherent to the activity itself. These activities were defined as not co-ordinated with other activities as it is the case in a project.

As a fourth group, we summarised four organisational activities which revolve around the filing of documents, organisation of meetings, facilitation, internal role distribution, work processes and setting up mailing lists. We called this the "organisational" category or "Management activities". It must be distinguished from the project. A series of activities is organisational if it refers primarily to the community. It is a project if it refers to the domain.
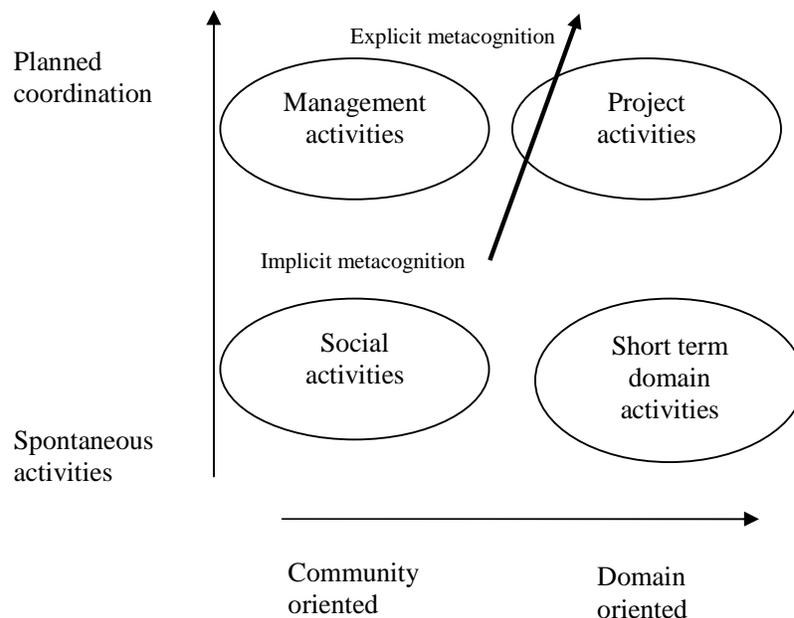
Figure 2 – Activity model (Künzel et al., 2007)

We finally found a number of activities very difficult to classify: now if a working group is formed to investigate, reflect on and improve the organisation of the CoP – what is that? If the CoP gets together and exchanges experiences with its latest project – is that social, project or management? If we take intention as a differentiation criterion, then the question is of improving similar future processes. If we describe the process, then that is a reflection. For such cases we agreed to introduce a new category, the metacognitive one, which can concern each of the four basic activities. Metacognition may be implicit or explicit, i.e. intentional or not and applied to any of the other categories of activity.

Several questions arouse about this initial model. The main one is that when considering a CoP activity, for example a face-to-face meeting dedicated to discussion about a professional practice, there are different dimensions that come under the different categories: there is management (organisation of the meeting by the coordinator), there is social activity (moments for getting to know each other in the CoP), etc. Rather than categories of activities, we deal here with different "dimensions" integrated into each activity. As Wenger (1998) states, the different fundamental processes that occur in CoPs

have to be considered as dimensions of a same phenomenon rather than different separate activities. For example, reification and participation are two processes that constitute an interconnected duality: they influence each other and when one is weak, the other tends to die down.

4.2   The new activity model (Jacquemart, Barlatier, & Daele, 2008)

In order to facilitate the use of the model to identify the different dimensions of activities that can occur in a CoP, we have proposed to build a three dimensions model. It does not refer to specific categories of activities as in the previous model. It is rather a toolbox containing different spaces that can be used for describing each CoP activity.
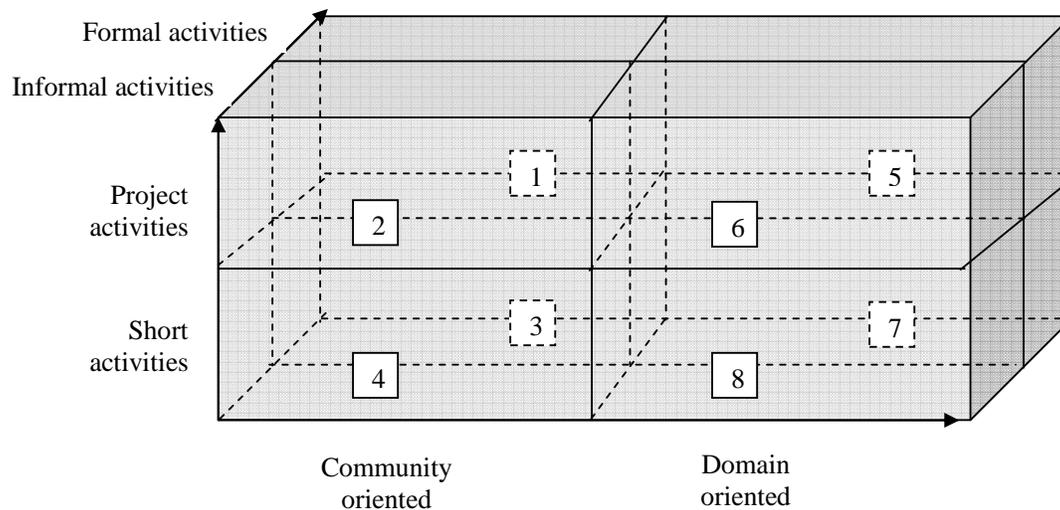
Figure 3 – Activity model 2008

The different dimensions for describing a CoP activity are divided into three axes: formal/informal, project/short, and community/domain oriented. We first define these three axes below, and then we present the eight areas that they form in the figure 3. Each area corresponds to a type of activity that is described below (section 4.2.2, page 18).

4.2.1   Axes definition

Axis 1: Community/Domain oriented activities

Community-oriented activities (coordination and communication)
This dimension concerns activities that aim at managing and facilitating the interpersonal relations inside the CoP. The objective is here to allow people sharing common social rules that help them to communicate, understand each other and negotiate meaning. These activities help members to build and share a collective identity. They also help them to know each other as individual, to know their individual needs, motivation to participate in the CoP, their interests and beliefs, as well as their personal objectives.

Domain oriented activities (knowledge sharing and knowledge creation activities)
This dimension of activities is about CoP members sharing knowledge, competences and practice related to their professional domain. It concerns the explanations related to tacit and explicit knowledge used by the CoP members in their practice.

Axis 2: Formal/Informal activities

Formal activities
These activities represent all the explicit activities that are organized formally within the CoP. As an example of combination between Axe 1 and Axe 2, a formal activity can be community or domain

oriented: the resource 'YellowPage' (p. 37) can be considered as a formal community-oriented activity (each CoP member introduces him/herself) while the resource 'GoodPractice' is a formal domain-oriented activity in which CoP members share their own practices about one domain issue (p. 29).

Informal activities
These activities represent all the activities that are organized informally within the CoP or that are not organized and appear spontaneously. These activities can be related to the community or the domain of the CoP.

Axis 3: Project/Short activities

Short activities
It includes activities that are not intended to be repeated and that have a short-term impact. They occur punctually.

Project activities
Activities that last over a long period of time and that need a schedule to be followed. They are organized in order to have a long-term impact.

4.2.2   Eight parts model

To illustrate how to use the model, we have tried to classify different kinds of activities in the eight boxes of the model. Some of these activities refer to the resources exposed in the next chapter of this document. Some have been put as examples and are illustrating activities occurring in PALETTE CoPs.

1. Community oriented – project – formal activities: CoP organisational development activities, shared database "Who's Who". For example, the resources 'YellowPages' (p. 37), 'MapCoP' (p. 36), and 'CharterPolicy' (p. 39).
2. Community oriented – project – informal activities: arguing, debating about a long-term, community-oriented issue.
3. Community oriented – short – formal activities: planned CoP social events (for example, the resource 'LearningSwot', p. 35).
4. Community oriented – short – informal activities: lunch between CoP members, exchanges between members during a break, etc.
5. Domain oriented – project – formal activities: associated activities with communicated results. Example: Project activities, shared knowledge database "who knows what", knowledge creation activities between members, etc. (see the resource 'DefineOntology', p. 38).
6. Domain oriented – project – informal activities: informal practice-based activities such as usual discussions on specific issues without notes or reification process.
7. Domain oriented – short – formal activities: planned short domain activities (with explicitly defined inherent goals) and realization of short activities included in projects.
8. Domain oriented – short – informal activities: spontaneous short domain activities (with tacitly defined inherent goals), punctual decisions about unplanned events and issues that have an impact on coordination of CoP domain activities. Example: defining together at the end of a meeting, during a chat session, the topics, themes, subjects to be presented for the next meetings.

4.2.3   Use and development of the model

When a CoP member is designated as animator, coordinator, moderator or when he/she has chosen to assume one of these roles, he/she should be able to identify existing activities that happen within the CoP. He/She can also compare these activities with the CoP performance (as defined by its members). From this perspective, this model represents a diagnosis tool.

Based on the desired CoP performance defined by its members, this model can be also used to identify activities to organise in order to support community or domain development, for instance.

This model can be considered as a diagnosis and as a decision-making tool as well. In the future, other models and typologies of activities could enhance this model in relation to learning and organisation of activities, for example from Henri & Basque (2003), Hewitt & Scardamalia (1998) and Hoadley & Kilner (2005).

4.3   Towards resources for CoPs

In the sections 3 and 4, we presented models of learning and activities in CoPs. They have been designed through very different research approaches and development. On the one hand, the learning model is based on a phenomenographic approach that analysed the learning experience of CoP members. On the other hand, the activity model is based on the content analysis of CoP coordinators that has then been used for depicting the relations between three main dimensions of CoP activities. The two processes of 'theorisation' of learning and activity in CoPs are very different. On the face of it, there is no direct relation between the two models. However in the Learning and Organisational Resources we have developed for CoPs, we made connections between them by sorting the Learning Resources in the different categories proposed in the activity model. The resources developed in the next section are indeed short activity scenarios that can be understood through the three dimensions proposed in the activity model.

However, in the future, some questions could be taken up in order to jointly develop the models:
- In what extent could new interviews of CoP members and coordinators inform the validation and development of both the models?
- In what extent could other literature reviews inform the development of our depictions?
- How to design new depictions of CoP learning and activities that would be relevant and significant for CoP members and coordinators?
- In what extent do certain types of activities have an impact on learning representations and outcomes of CoP members?

In the future, these four questions could be asked in order to develop both the models and the development of the resources that they informed.

5 – LORs – Learning and Organisational Resources

5.1 Purpose

This section aims at describing Learning and Organisational Resources (LORs) for CoPs. These resources could be used by CoPs coordinators or members in order to analyse/observe/evaluate individual/collective learning within their CoP or organise/evaluate useful activities for the CoP. These resources are anchored in the analysis of the CoPs activities (see above in section 4), the development of a model of learning in a CoP (see above in section 3), and the description of the PALETTE services from a user point of view (see D.PAR.04).

A LOR could be defined as a 'paper-based' conceptual resource that allows those involved in CoPs (moderators and members) to:
- Understand, manage, support or evaluate their learning,
- Identify, develop, manage or evaluate collective activities,
- Support their choices and individual/communal uses of technological tools and appropriate them.

On the one hand, according to the D.PAR.05, we could consider the LORs as "artefacts that do not cause breakdowns in the fluid conduct of work" of a CoP (Bødker & Christiansen, 1997, p. 220). This corresponds to what Engeström calls "downward contextualization" (Engeström, 1990). LORs are designed for providing CoPs with tools to support and improve their activities, sustain their needs and objectives, foster communication, learning, etc. On the other hand, the LORs are also designed for supporting CoPs towards their expansion, maturation, and change. This then corresponds to what Engeström calls "upward contextualization". Hence, the LORs could be also considered as "springboards" (Bødker & Christiansen, 1997; Engeström, 1990) for making CoPs aware of new possibilities, activities and challenges that they could take up in the future.

In addition, this section also aims at presenting our general method for trialling and validating the LORs with CoPs. First, it classifies the different types of developed LORs regarding the Generic Scenarios (see D.IMP.08). Second, examples of existing resources for those who are involved in CoPs are cited. Third, the common structure of the PALETTE LORs is presented. Fourth, the LORs are presented. Fifth, the validation process of the LORs with CoPs is presented as well as its outcomes.

In summary, our approach aims at developing and validating conceptual resources for CoPs by situating these resources into real scenarios of use by CoPs. These scenarios are based on CoP needs and activities.

5.2 Types of LORs regarding Generic Scenarios

In the report "Refinement and Instrumentation of the Participatory Design Methodology", the processes of elaboration and validation of LORs (formerly 'Learning Services' or LS) were described as follows (Daele et al., 2007, pp. 26-27):

> The pedagogical developers and the CoPs delegates are the main actors of this process. CoPs members get also involved for the validation of the services.
> The LS are defined in the D.IMP.03. We specify this definition by adding that the LS is composed of the description of a learning strategy, methodological and information resources, and a support strategy to be set up for supporting the CoPs members learning.[2] They may thus consist in grids of observation or analysis, checklists, ways to organise the CoP, etc. In addition, three types of LS are developed:
> 1. Services that support the improvement of CoPs members practice;

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[2] Now at the end of the project, we would simply use the term "scenario" rather than "learning strategy" or "support strategy". In the presentation of the LORs in this deliverable, we rather use the term "scenario".

2. Services that support the development or the organisation of the communities;

3. Services to support the choice of ITS[3] and their appropriation by the members.

Each of these types of services is designed by pedagogical developers in interaction with CoPs delegates and is validated with the participation of CoPs members. They are developed following a participatory pedagogical design method and based on CoPs learning and development models that are conceived through the PALETTE research. The generic and specific scenarios as well as the CoPs activity models inform the design of the services.

Figure 4 – Developing LS (Daele et al., 2007, p. 27)
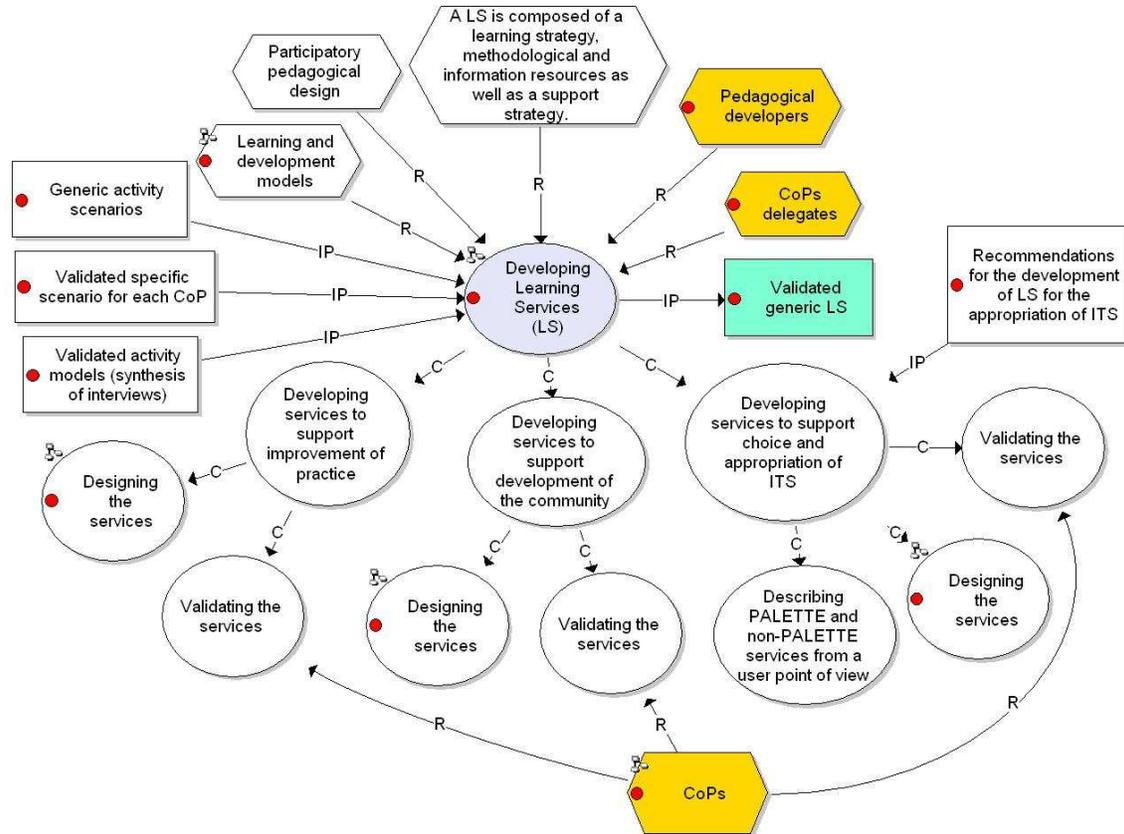
In line with that report, the table 6 suggests interrelationship between the Generic Scenarios (see D.IMP.08) and the LORs. At the intersection between Generic Scenarios and LORs, each cell describes their objectives. By relating the LORs with the Generic Scenarios, we assume that the LORs will play both a role of "downward contextualization" and a role of "upward contextualization" (Bødker & Christiansen, 1997; Engeström, 1990). The LORs are designed for supporting the daily management and activities of the CoPs but their relation with the Generic Scenarios put forward other possibilities, other possible activities and objectives that a CoP could take up.

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[3] Integrated Technological Services.

Table 6 – Generic Scenarios and objectives of LORs

		Types of Learning and Organisational Resources		
		Managing, supporting and evaluating (individual and collective, and informal and formal) learning	**Organising, managing, developing, and evaluating CoPs**	**Choosing and (individually and collectively) appropriating tools, supporting CoPs in conceiving scenarios of tools uses**
Types of Generic Scenarios	**'Reification'**: - Producing CoP resources (e.g., documents) - Enriching CoP resources with semantic information - Searching for CoP resources - Reusing CoP resources - Build Cop memory	Identifying learning needs, suggesting ways for individual reification of practices-knowledge, evaluating the learning activities and events	Suggesting ways for collective reification of practices-knowledge; evaluating the activities	Suggesting scenarios of uses for reification of practices-knowledge
	'Debate & Decide': - Debating about an issue - Arguing - Decision making - Keeping informed about the above third processes	Confronting arguments, changing one's view, enabling cognitive conflicts and their positive resolution, etc.	Negotiating, discussing, and making decisions about the activities of the CoPs	Negotiating, discussing, and making decisions about the choices and uses of tools
	'Identity building': - Managing CoPs activities - Managing CoPs members - Managing CoPs events - Managing CoPs resources respecting to CoPs activities - Keeping informed about the above activities	Social learning, situating the members and their competences, developing collective activities that enable learning	(Auto)diagnosing CoP needs; elaborating and organising specific activities; analysing conditions for emergence and sustainability	Matching different types of activities with types of (PALETTE or non-PALETTE) tools and scenarios

There are three types of LOR related to the Generic Scenarios:
1. **Managing, supporting and evaluating (individual and collective, and informal and formal) learning**: these LORs are to be used by CoPs coordinators or members, for instance, in order to identify learning needs, identify key competences of members that could be used for addressing specific domain issues, evaluate members' learning through CoPs activities, etc.
2. **Organising, managing, developing, and evaluating CoPs**: these LORs identify typical CoPs activities (i.e. the Generic Scenarios) and provide advice for their organisation.
3. **Choosing and (individually and collectively) appropriating tools, supporting CoPs in conceiving scenarios of tools uses**: these LORs advise CoPs moderators or members on the use of specific tools for specific activities and ways to efficiently appropriate them.

5.3   References to existing resources

Many tools have been developed in the last years for the CoPs coordinators/moderators to manage their group. We examined some typical examples such as those provided by Wenger, McDermott, & Snyder (2002). Specific Knowledge Management tools have also been distributed by dedicated organisations. They are presented in the form of short activity scenario to carry out with a group of professionals. Here are the examples we referred to:
- http://www.daretoshare.ch/en/Dare_To_Share/Knowledge_Management_Toolkit
- http://www.odi.org.uk/RAPID/publications/Documents/KM_toolkit_web.pdf
- http://www.cefrio.qc.ca/pdf/GuideCommunautes.pdf (in French)
- http://www.cpsquare.org/
- http://www.icohere.com/webcommunities_practice.htm
- http://knowledge.usaid.gov/communityhome.html

- http://www.km4dev.org/wiki/index.php/Community_Knowledge
- http://www.learning-to-fly.org
- http://www.library.nhs.uk/KnowledgeManagement/

These tools allow coordinators to support their CoP at different stages, manage the activities of their CoP, as well as support the learning of the members or evaluate their functioning. They are often oriented towards knowledge management activities. We found these examples as particularly inspiring both through the activities they suggest and their form. We kept some characteristics that we found relevant for our purpose. For us, the LORs had to be based on several principles:

- Each LOR should be presented as a short text of maximum 3 pages.
- If a LOR proposes an activity or any process, clear steps should be described detailing the actions and the different stakeholders.
- Illustrations and tables should be used as much as possible.
- Examples of uses by CoPs should be provided.
- A summary of each LOR ("credit card" size) should be available.
- Related resources on the Web or within PALETTE should be proposed.

5.4   Structure of a LOR

We then conceived a LOR as a scenario of activity described into a short form (1-2 pages maximum) to implement with a CoP. Each LOR is presented following these common fields:

1. Title (a short and smart title with possibly a longer sub-title)
2. A brief summary of the LOR ("bank card" format): its objective (1 line), target public, scenario (1 line), possible technological tool(s) supporting the scenario (1 line)
3. Objective(s): purpose of the LOR as well as its target public (CoP members and/or coordinator)
4. Scenario: the story of its use within a CoP, highlighting the different steps, the possible aspects that happen at a distance or in face-to-face mode, the roles of the participants, the expected number of participants, etc.
5. Examples of technological tools (PALETTE or non-PALETTE) that could support the scenario
6. Examples of uses by CoPs from different domains (based on the specific scenarios)
7. Links to external further resources (such as those presented in the section 5.3 here above).

5.5 PALETTE LORs

The version of the LORs presented here is the version that has been trialled and evaluated by CoPs (see section 6, p. 53). The amended versions after the trials are available in SweetWiki pages at this address: http://argentera.inria.fr:8080/swikipalette/data/Lor/LorHome.jsp. They will also be available on the PALETTE website as PDF files: http://palette.ercim.org/. On SweetWiki, the LORs could continue to evolve after the end of the project. The titles have always the same form: Type of LOR (1, 2 or 3), Type of Generic Scenario that it is related to, Name, and Short Wiki name.

5.5.1 LORs 1: Managing, supporting and evaluating (individual and collective, and informal and formal) learning

Here is the list of LORs in this category. They are related to each Generic Scenario. Their Wiki short names are cited in brackets.

1. Related to 'Reification':
   - Understanding the perceived needs of CoP members (NeedCoP)
   - Analysing individual learning processes (AnalysingLearningProc)
   - Sharing good practices and lessons learned (GoodPractices)
   - What and how am I learning? (WhatHow)
   - Individual issue analysis (IndividualIssue)
2. Related to 'Debate & Decide':
   - Connecting individual objectives with CoP activities (ObjectivesActivities)
   - The learning SWOT (LearningSwot)
3. Related to 'Identity building':
   - Mapping your community of practice (MapCoP)
   - Yellow Pages and map of competences (YellowPages)
   - How to define an ontology? (DefineOntology)
   - Elaborating CoP charter and policy (CharterPolicy)

1. LOR1 – GS 'Reification': Understanding the perceived needs of CoP members (NeedCoP)

Summary
- Objective: for the CoP coordinators, to analyse the objectives and needs of the CoP members.
- Scenario: use of a questionnaire, presentation of the results, and elaboration of adapted activities.

Objectives
The objective of this activity is for CoP coordinators to gain a sense what CoP members wish to gain from their involvement in the CoP, in terms of whether they are focused on developing their own expertise or developing the community. In examining the responses of members to the questionnaire, CoP coordinators can develop a sense of the sorts of activities that CoP members will perceive as most useful in developing their knowledge and/or practices. The activity can also be used to encourage CoP members to discuss their different views of how the CoP can support the development of their knowledge and practices.

Scenario
CoP coordinators give the following statements for CoP members to respond to. This can be done on-line or on a paper based inventory.

Beside each statement please thick the box that most accurately reflects your interests in X	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Within this group, I am more interested in developing my expertise than helping others to develop theirs*.					
2. My focus in participating in this group is to change how we all do things.					
3. Within this group, I am more interested in the views of experts than peers*.					
4. I'd rather participate in shared activities than listen to what the experts have to say.					
5. The best thing about being involved in this group is the way that it allows me to change my practice.*					
6. The best thing about being involved in this group is the helping the group as a whole to develop.					
7. …					x
8. …	x				

The responses are scored from 1 (strongly disagree) to 5 (strongly agree), with the scores for items with an '*' reversed (items 1, 3, and 5). The lower the overall score, the more CoP members are interested in developing their own practice than developing communal activities. CoP coordinators can use this tool to examine the focus of individual members, as well as to examine the differences between CoP members.

The CoP coordinator can use items 7 and 8 to check if there are important activities missing from the questionnaire. In the guidance to the questionnaire, CoP members can be advised: "If the items do not reflect your interests in the CoP, please add an additional item that reflects your interests as item 7. If there are activities that would like the CoP NOT to engage in, please add it as item 8."

The results of the poll can be displayed with a diagram in "spider" or "radar" allowing comparing the individual views and collective on the items contained in the questionnaire. This would allow

discussion of the similarities and differences between CoP members' views of the most useful focus of CoP activities.

This activity can be followed by the activity "Connecting individual objectives with CoP activities (ObjectivesActivities – http://argentera.inria.fr:8080/swikipalette/data/Lor/ObjectivesActivities.jsp)" for matching identified needs with activities.

Tools to support activity
-

Example of uses by CoPs
This tool is still in development. The items need to be trialled with a number of CoPs and the order of the items probably needs to be changed. Once the items have been trialled with around 100 CoP members then the alpha reliability of the scale can be investigated, which could lead to the amendment or removal of some items.

Links to further resources
-

2. LOR1 – GS 'Reification': Analysing individual learning processes (AnalysingLearningProc)

Summary
- Objective: to identify the learning processes experienced by the CoP members.
- Scenario: a questionnaire that the coordinator circulates to the members.
- Tools: paper/pen questionnaire or online questionnaire (GoogleDocs) or CoPe_it!

Objectives
This LOR aims at identifying the main or preferred learning processes adopted by the CoP members throughout the CoP activities. It is a questionnaire that the coordinator can circulate. On the basis of the answers to this questionnaire, the coordinator can then organise specific activities oriented towards the preferred learning processes of the members.

Scenario
CoP coordinators give the following statements for members to respond to. This can be done on-line or on a paper based inventory. The two last rows of the table can be used for identifying other statements with which the members strongly agree or disagree. The members write themselves new statements that they agree or disagree with. The CoP coordinator can also possibly add other statements to the questionnaire.

In the statements, the term "CoP" can be changed for the name of the specific CoP. The terms "knowledge/practices" and "experts" can be changed as well for better expressions related to a specific CoP context.

Beside each statement please thick the box that most accurately reflects your interests in X	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Through the activities of the CoP, I develop my knowledge/practices through presentations by experts and discussions with them.					
2. Through the activities of the CoP, I develop my knowledge/practices through discussions of practical issues with the other members of the CoP.					
3. I develop my knowledge/practices thanks to informal personal discussions with other members.					
4. I develop my knowledge/practices thanks to collective activities organised within the CoP.					
5. I develop my knowledge/practices thanks to useful readings shared within the CoP.					
6. Personal suggestion.	x				
7. Personal suggestion.					x

In addition, a question can be added to the questionnaire asking the members to tell in a few paragraphs a personal learning experience that occurred during the last activities (formal or informal) of the CoP. The coordinator can identify in these accounts the main processes of learning experienced by the members.

The results of the survey can also be shared among all the members in order they situate their own preferred learning process regarding the other members' one or the collective one. The results can be displayed through a diagram in "spider" or "radar".

Tools to support activity
- GoogleDocs (http://docs.google.com/) can be used for creating an online questionnaire and getting the answers into a spreadsheet that can then be used for presenting the results into graphics.
- With CoPe_it! (http://copeit.cti.gr/), the coordinator can prepare a map with the five proposed statements as ideas. The members add their own opinions regarding the five statements. Their opinion takes the form of ideas, related to the five main statements. If they agree with the statement, they colour the link green while if they disagree with the statement, they colour the link red. Once each member has added his/her ideas regarding each statement, the coordinator can change the desktop view into a formal view. He/she then will see the green and red opinions regarding each of the five statements.

Example of uses by CoPs
-

Links to further resources
- This LOR is similar to the WhatHow (http://argentera.inria.fr:8080/swikipalette/data/ Lor/WhatHow.jsp) LOR but is restricted to the analysis of the members' personal learning experience.
- An example of use with GoogleDocs can be found at this address: http://spreadsheets.google.com/viewform?key=pJfIT0McOwzmfZ-lm1gRCSw.

3. LOR1 – GS 'Reification': Sharing good practices and lessons learned (GoodPractices)

Summary
- Objective: to describe professional practices in various situations related to important issues.
- Scenario: discussion based on individual experience and practices of the participants.
- Tools: paper/pen, Amaya, SweetWiki or discussion forum.

Objectives
The objective of this LOR is to collect the good practices experienced by the CoP members in various professional situations. The members are asked to describe their practices regarding a specific topic by highlighting the lessons they learned about known (contentious or particularly difficult) issues as well as the practices they would advise other professionals about these issues. The CoP can then have a shared repertoire of described practices from experienced professionals. These practices can finally be discussed and negotiated.

Scenario
The activity is described as it took place in face to face mode. However, it also can be organised at a distance through different media (see the 'Tools' section below). In face-to-face the activity lasts about 3 hours (one half day) with a group of 8 to 12 participants.

1. The group chooses one or two topics of discussion related to well-known professional issues. The issues will preferably be related to contentious or difficult professional situations so that the discussion leads to a debate.
2. Regarding these issues, the participants are asked to individually think about 3 questions (they can take personal notes):
   - Have I already experienced this issue? If yes, how could I describe my experience (when, where, with whom, what did I do, why)?
   - From this experience, what are the lessons I learned? What did I keep from this experience and what do I no longer do?
   - From this experience, what are the good practices that I could pass on to others? What advice could I pass on?

   If more than one issue have been chosen, it can be good that each member presents his/her experience/practices regarding only one of the issues that he/she chooses. This will help to safe time and to allow each one to present one's experience.
3. Each participant tells his/her story. In a first step, the coordinator and the other participants can ask questions of clarification or for detailing the personal lessons learned and good practices. Afterwards, a discussion can be held in order to debate the good practices that each one would keep.

   At this stage the role of the coordinator is important for regulating the debate. What is discussed must remain the practices of the members, not the members themselves as persons.
4. The coordinator or an assistant takes notes in order to share the experiences, lessons learned and good practices after the meeting.
5. At the end, the coordinator evaluates the meeting by circulating a little questionnaire asking the participants the positive and negative aspects of the discussion as well as their learning outcomes.

Tools to support activity
- In order to take notes during the discussion, the coordinator can use Amaya (http://www.w3.org/Amaya/) with an appropriate template. The file produced can then be easily shared or displayed on a web page. When several discussions will have been organised, the format of the reports will allow easily searching and reusing pieces of contents for other purposes (an annual report of the CoP activity for example).
- SweetWiki (http://argentera.inria.fr:8080/) can also be used in order to take note during the meeting. After the meeting, the members can then add their additional comments.

- If the discussion takes place at a distance, it can be organised through a forum during a specific period of time (for example, one week). The coordinator will have to take care that each participant takes part in the presentation of the personal experiences and in the discussion.

Example of uses by CoPs
- In the CoP of the Learn-Nett tutors, this LOR is organised in 5 steps during the tutors' training (one day synchronous training at a distance)
    a. The participants form sub-groups of 3-4 tutors. They have to discuss 3 or 4 cases of pedagogical situations with students. They use a chat room.
    b. Each member of the group presents his/her own experience regarding each case.
    c. A debate is organised. The goal is to write together a common solution to each case.
    d. The sub-groups present their solutions in a plenary meeting (visioconference). The members of the other sub-groups can comment or ask questions.
    e. The coordinator and volunteers write the cases and proposed solutions in SweetWiki pages.

Links to further resources
- http://www.daretoshare.ch/en/Dare_To_Share/Knowledge_Management_Toolkit/Good_Practice
    at this address, further resources are proposed to spark off practices. The presentation is in English, German, French and Spanish.

4. LOR1 – GS 'Reification': What and how am I learning? (WhatHow)

Summary
- Objective: to analyse one's learning processes and outcomes.
- Scenario: personal reflection on specific statements.
- Tools: paper/pen exercise, CoPe_it!

Objectives
This LOR is to be used by individual members of CoPs. It aims at supporting a member in identifying his/her learning processes and outcomes through his/her participation in a CoP. It is based on the model of learning developed through the analysis of CoP members' learning accounts. For the members, this self-analysis can highlight preferred learning situations and activities or turn their attention to other learning processes that they could develop. For the coordinator, to better know the learning experience of the members can help to propose and organise specific activities.

Scenario
1. The coordinator circulates the table below asking the members to situate themselves into the different categories:

How am I learning?	What am I learning?
I learn from experts.	I acquire new information.
I learn from the other members.	I consolidate my existing knowledge/practices.
I learn thanks to my participation in the CoP activities.	I change my knowledge/practices.
We learn together thanks to our common participation in the CoP activities.	We consolidate our communal knowledge/practices.
Personal suggestion	We change our communal knowledge/practice
Personal suggestion	We change the practices of the profession.
	Personal suggestion
	Personal suggestion

For each statement, the CoP member evaluates how far he/she is concerned; he/she finds examples; he/she evaluates how the statements he/she did not choose would be interesting for him/her.
The members may also match the statements in the first column with the statements in the second one. For example, when "I learn from experts", "I change my knowledge/practice".

2. The coordinator can collect the self-analysis of each member and situate the preferred learning processes as well as to have a view of the perceived learning outcomes at one moment.

Tools to support activity
- CoPe_it! (http://copeit.cti.gr/) can be used for supporting the matching between the two columns. Each member can add links (red or green) between the statements of each column. The preferences of the group can then be easily displayed.

Example of uses by CoPs
-

Links to further resources
- This LOR is similar to the LOR 'Analysing individual learning processes' (http://argentera.inria.fr:8080/swikipalette/data/Lor/AnalysingLearningProc.jsp) but extends the self-analysis to the outcomes of learning.

5. LOR1 – GS 'Reification': Individual issue analysis (IndividualIssue)

Summary
- Objective: to discuss an individual professional issue and propose solutions.
- Scenario: presentation and discussion of an individual issue and reification of the experience.
- Tools: SweetWiki, Amaya, or word processor

Objectives
The objective is to discuss a personal issue experienced by a CoP member and to propose answers to this issue that the presenter will implement in his/her practice.

Scenario
The activity is based on a face-to-face discussion that could last between 1 and 2 hours. The group can be composed of 8 to 12 participants. The coordinator should play the role of the moderator of the discussion and avoid expressing his/her own point of view on what is discussed.

1. One voluntary participant proposes the discussion topic: a professional situation in which he/she experienced a dilemma, or felt to not have chosen the right behaviour, or felt to not know what to do. The situation should be based on a personal dilemma or a contentious topic. The presenter is free to present his/her situation during about 15 minutes. Nobody should interrupt the presentation.
2. The other participants ask questions of clarification. Here, the coordinator/moderator should avoid questions that are judgments of the situation or actions of the presenter. The presenter answers the questions.
3. The other participants then propose actions to implement in such situations. There is no debate at this stage. Each participant tells his/her solutions in turns.
4. The presenter summarizes the different solutions (questions of clarification may arise) and tells which one he/she finds the most suitable to his/her personal situation. Again, the coordinator makes sure on the non-judgement of the questions and answers.
5. The presenter elaborates an action plan for implementing the chosen solution. The other participants propose possible advices.

After or during the activity, the coordinator or a participant can take notes for describing the situation, the proposed solutions and the chosen action plan. The account (anonymous) can then be shared.

After the meeting, the presenter will implement the action plan. A second meeting can then be organised in order to debrief the implemented action and possibly refocus it. The results of the action can be reported by the coordinator and shared.

Tools to support activity
For the discussion itself, there is no need of tool. However, during or after the discussion, the coordinator or a participant can use SweetWiki (http://sweetwiki.inria.fr/), Amaya (http://www.w3.org/Amaya/) or a word processor in order to summarize the discussion and proposed solutions, and share it with all the participants.

Example of uses by CoPs
-

Links to further resources
- A short practical guide of the "Co-développement professionnel" in French: http://provirtuel.com/doc/gr-codeveloppement.html.
- Questions and answers about Professional Codevelopment: http://www.cva-acfp.ca/annual_conference_2001_reports/Conference2001Workshop5EnglishWeb.htm.

6. LOR1 – GS 'Debate & Decide': Connecting individual objectives with CoP activities (ObjectivesActivities)

Summary
- Objective: to plan activities related to the individual objectives and needs of the CoP members.
- Scenario: analysis of the NeedCoP activity by the coordinator, then face-to-face or online discussion with the members, and finally decision making on the activities to organise.
- Tools: forum, (collaborative) mind mapping software or web service

Objectives
After having identified the individual objectives of the CoP members (see LOR NeedCoP), this activity aims at supporting CoP coordinators to develop suitable activities. The objective is thus to connect activities with the perceived needs and objectives of the members.

Scenario
1. First the coordinator organises a discussion about the objectives of each member through the activity 'NeedCoP'. Through this activity, the coordinator can have a global view of the focus of the members of the CoP.
2. Different types of activities may be organised with a CoP. They can be individual, group-based or organised with the whole group. They can be focused on specific professional practices (how to), professional issues and challenges (status, development of the profession, relations with other professionals, etc.), projects, etc. The LOR2 provide a range of CoP activities.
   Regarding the results of the questionnaire used in the previous activity (NeedCoP), the coordinator can identify tendencies in the objectives of the members:
   - whether the members are more focused on their personal development or the group's one;
   - whether the members are willing to change their practices and views or rather to confirm their existing ones;
   - whether they prefer to learn from experts or to share with peers.
   The coordinator can also identify whether the members rather feel experts or novices.
3. The coordinator prepares a brief report of the results of the survey (2 or 3 slides) and proposes a list of activities in line with the results (see the LOR2).
4. The members can comment the results and proposals, and propose their own ideas.
5. The result of the activity is a list of activities that the coordinator plans.

Tools to support activity
Tools may be used if the activity takes place at a distance:
- a forum that allows reading the comments of each one at one place.
- a collaborative mind mapping software can be used :
  - Bubbl.us (http://www.bubbl.us/), nice and easy to use application.
  - a CoPe_it! workspace (http://copeit.cti.gr), PALETTE service that allows creating a map in which the coordinator can add the different types of individual objectives, and links between these objectives and proposals of activities. The members can then add their own ideas of activities into the same map and comment the ideas of others. Synchronous discussions may also be organised for directly discussing the different ideas.

Example of uses by CoPs
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Links to further resources
- The LOR NeedCoP (http://argentera.inria.fr:8080/swikipalette/data/Lor/NeedCoP.jsp) can be organised before the present LOR in order to identify the individual objectives and needs of the CoP members.
- LOR2 (http://argentera.inria.fr:8080/swikipalette/data/Lor/OrganisingCoPs.jsp) propose a range of CoP activities classified following 3 main axes: informal/formal, community/domain-oriented, short/project activities.

7. LOR1 – GS 'Debate & Decide': The learning SWOT (LearningSwot)

Summary
- Objective: to identify the main learning processes that occur in a CoP.
- Scenario: group discussion about the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the learning processes experienced in the CoP.
- Tools: Amaya, SweetWiki, CoPe_it!

Objectives
The objective of this LOR is to evaluate the learning processes that occur in the CoP. It is about a group discussion aiming at identifying the Strengths, the Weaknesses, the Opportunities and the Threats of the learning processes experienced by the CoP members.

Scenario
1. The coordinator organises a group discussion preferably on a face to face mode. This discussion may last between 1 and 2 hours.
2. Firstly, the discussion is oriented towards the 'past' in order to evaluate the activities of the CoP from the learning point of view. The main question asked is: 'From the learning point of view, what are the Strengths and the Weaknesses of the activities organised by the CoP in the last months?'. Other sub-questions can be asked such as: 'Did the activities support learning of the members?', 'What are the outcomes of the activities in terms of learning?', 'Did they enable efficient learning process: analysis, reflection, debates, etc.?', etc.
3. Secondly, the discussion is oriented towards the 'future' in order to identify the future Opportunities and possible Threats. The main question is: 'From the learning point of view, what are the Opportunities that we could take up and what are the Threats that we should expect and avoid?'. More specific questions could be asked such as: 'What kind of activities could we organise in order to meet the objectives and needs of the members?', 'What kind of activities could we organise in order to meet the preferred learning processes of the members?', 'What should we avoid?', etc.
4. Finally, the coordinator writes a report and proposes a list of decisions (activities that could be organised). The CoP members can then express their opinions regarding these proposals and vote (or negotiate).

Tools to support activity
- In order to take notes during the discussion, the coordinator can use Amaya (http://www.w3.org/Amaya/) with an appropriate template. The file produced can then be easily shared or displayed on a web page. When several discussions will have been organised, the format of the reports will allow easily searching and reusing pieces of contents for other purposes (an annual report of the CoP activity for example).
- SweetWiki (http://sweetwiki.inria.fr/) can also be used in order to take note during the meeting. After the meeting, the members can then add their additional comments.
- In order to debate and decide the future activities to organise by the CoP, CoPe_it! (http://copeit.cti.gr/) can be used. The coordinator can open a workspace with a list of possible activities and the members express their opinions and arguments towards or against each proposal.

Example of uses by CoPs
-

Links to further resources
- http://www.daretoshare.ch/en/Dare_To_Share/Knowledge_Management_Toolkit/SWOT is a general resource on SWOT analysis in CoPs, not necessarily focused on learning. Further texts in English, French, German and Spanish are presented.

8. LOR1 – GS 'Identity building': Mapping your community of practice (MapCoP)

Summary
- Objective: to highlight how CoP coordinator and members picture their CoP.
- Scenario: a reading is proposed, then some questions are asked for generating discussion and debate within sub-groups, finally the sub-groups share their view through maps they draw on papers.

Objectives
To be used by CoP coordinators, so that they can gain a sense of how CoP members see their CoP. To give CoP members access to ideas about CoPs, so they can draw on these to think about their participation within their CoP. For CoP members to gain a sense of the different ways in which other CoP members experience the CoP.

Scenario
1. This activity can take place in a face to face session or on-line. If it is conducted in a face to face session, then it will take about two hours to complete.
2. The CoP coordinator asks the CoP members to read the description of communities of practice on Etienne Wenger's Website: http://www.ewenger.com/theory/index.htm. A document in French can also be used: https://www.cefrio.qc.ca/upload/1432_GuideCommunautes.pdf, pages 8 to 16 (foreword by Etienne Wenger) or the chapter 2 at pages 21 to 24.
3. The CoP coordinator asks CoP members to use this reading as the basis for a discussion of the extent to which their group can be considered a CoP. The CoP members should be split into groups of four and discuss their answers to the following questions:
   - How would you define the domain of your group? What interest do you share as a group?
   - How would you define its community? Who are central community members? Who are at the periphery?
   - How would you define its practice? What are the stories and tools that you share?
   - What criticisms do you have of the notion of Community of Practice in relation to your CoP?
4. Based on this discussion, the CoP coordinator asks each small group to draw a map or diagram of the CoP, which illustrates the relative positions of different members, the ways in which different members work together, and the different directions in which the CoP could move in the future.
5. The different groups share their maps of the CoP and discuss their similarities and differences.

Tools to support activity
In a face-to-face environment, CoP members will need a print out of the Etienne Wenger piece and access to pens and A1 paper for drawing the map/diagram.

In an on-line environment, CoP members will need a discussion space and a shared area in which to construct and then publish their maps/diagrams.

Example of uses by CoPs
This activity has been piloted with two cohorts of the Lancaster Doctoral Programme in a face-to-face environment. Feedback from CoP members indicated that it provided a very helpful space for them to think about how they worked together as a group and how they were positioned in relation to other members of the doctoral programme.

Links to further resources
-

9. LOR1 – GS 'Identity building': Yellow Pages and map of competences (YellowPages)

Summary
- Objective: to introduce the CoP members through their personal knowledge and competences.
- Scenario: the members introduce themselves into a common form and then share their presentation with the other members.
- Tools: CoPe_it!, SweetWiki, eLogbook, presentation software

Objectives
The objectives of this activity are:
- to allow members introducing themselves into the CoP;
- to identify who holds what knowledge and competences.

The coordinator can then map the knowledge and competences that the members hold together.

Scenario
1. The coordinator systematically asks the new CoP members information in order to identify them:
    - name, first name, photo;
    - contact information: email or phone or identity in online communication networks (Skype, MSN, ICQ...);
    - address of personal website or blog;
    - actual position and description of work;
    - a few reasons why they are member of the CoP;
    - assets: personal knowledge and practices, expertise on specific topics related to the domain of the CoP;
    - needs and objectives while participating in the CoP;
    - a personal presentation (one or two paragraphs).
2. The coordinator gathers the answers and publishes a page for each member (on a private website for example).
3. The coordinator maps the competences and objectives of the members with a software (PowerPoint, OOo presentation, CoPe_it!...).
4. The members could have a global view of the knowledge and competences held by the CoP and that can be shared within the community. Hence they can contact any other CoP member in case they have any question or issue regarding their professional practice.

Tools to support activity
- CoPe_it! (http://copeit.cti.gr/) can be used for mapping the assets of the members. The members can also use the map for adding or changing the elements of the map.
- SweetWiki (http://sweetwiki.inria.fr/) can be used for each member creating his/her personal page. The coordinator will provide a template with the list of information to share.
- eLogbook (http://elogbook.epfl.ch/) can be used for each member creating his/her personal page.

Example of uses by CoPs
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Links to further resources
- http://www.daretoshare.ch/en/Dare_To_Share/Knowledge_Management_Toolkit/Yellow_Pages proposes further presentations of a YellowPages activity in English, German, French and Spanish.

10. LOR1 – GS 'Identity building': How to define an ontology (DefineOntology)

Summary
An ontology is a representation of a domain, with the different concepts implied and relations between these concepts. The aim of the ontology is to propose an unambiguous and unanimous view of the domain addressed. In the context of the development of knowledge management services, an ontology enables to annotate CoP resources in addition to model the notion of CoP. It is an interesting exercise for the members of a CoP to define their own ontology as it helps them to clarify the representation they have concerning their practices and as it helps them to arrive to a consensus concerning the way they define the vocabulary they use and the relation between the terms.

Most of CoPs accumulate a lot of documents that are available on multiple platforms and that are disseminated in various servers. BayFac was designed to allow CoPs to have a unique Web platform where most of its documents could be stored. BayFac is used as a platform that stores files, in order to search and classify these according to specific concepts, defined in a CoP specific ontology. The facets used in BayFac are chosen to classify and search CoP resources. These facets are taken from the ontology of the CoP.

The ontology represents the different concepts intervening in the CoP practice. As the list of thematic are specific to each CoP, it is up to CoP members to build their own ontology. It is an important step that involves CoP members, and their view of their practice. The members, with help of researchers, have to design their own practice ontology, which will be exploited by BayFac.

Objectives
The objective of this LOR is to help CoPs that want to use BayFac or any ontology-based service to design their own ontology.

Scenario
1. The CoP moderator enrols members who want to work on the ontology definition.
2. CoPs members identify the thematic and main concepts that are commonly shared within their CoP. From the list of these concepts, the ontology is at its beginning and can be deployed through the relations between the concepts and their properties. A tool like Protege (http://protege.stanford.edu) can be used to build such an ontology.
3. CoP moderator proposes this ontology to all CoP members and asks for validation of it.
4. Once the ontology is designed, facets are determined by choosing some concepts or relations to exploit. Facets are then created by developers in BayFac following the information listed in the BayFac Installation Guide (see the tools below).

Tools to support activity
- BayFac User Guide: http://prod.palette.tudor.lu/files/help/
- BayFac Installation Guide: http://prod.palette.tudor.lu/files/Installation_process.doc
- Protégé: http://protege.stanford.edu

Example of uses by CoPs
The ontology definition has been done with members of the CoP e-learning. Once it was decided to use BayFac as a shared repository for CoP members, the moderator and 4 members (focus group) have started to work on the thematic of the CoP. After a meeting, members have started to review their collective documents and have listed the thematic that were exchanging about. A member of the CoP has worked with a developer of BayFac to understand the way the facets (elements of the ontology) were used in the tool. She has helped the members of the focus group to define the ontology and the facets to put into the tool. Once members of the focus group have finished building the ontology, they have presented it during a face-to-face meeting to all CoP members. Feed-backs and questions have allowed focus group members to propose to BayFac developers a finalized ontology and the different facets to add to BayFac.

Links to further resources

▪ Tifous, A., El Ghali, A., Dieng-Kuntz, R., Giboin, A., Evangelou, C., Vidou, G. An Ontology for Supporting Communities of Practice. The Fourth International Conference on Knowledge Capture (K-CAP'2007), 28-31 October 2007, Whistler, BC, Canada (http://palette.ercim.org/images/ Publications/kcap2007-tifous-et-al-final.pdf)
Abstract: The approach, used in the PALETTE project to develop Knowledge Management (KM) services, is based on an ontology dedicated to CoPs and built from analysis of information sources about eleven CoPs available in the project. This ontology aims both at modelling the members of CoPs and annotating CoP knowledge resources. The paper describes the method for building this meta-ontology, valid for several CoPs, and its structure and contents.

▪ Tifous, A., El Ghali, A., Giboin, A., Dieng-Kuntz, R. O'CoP, an Ontology Dedicated to Communities of Practice. 7th International Conference on Knowledge Management (i-KNOW'2007), 5-7 September 2007, Graz, Austria (http://palette.ercim.org/images/Publications/ iknow2007_tifous-et-al_final.pdf)
Abstract: The PALETTE project dedicated to learning in Communities of Practice (CoPs) aims to offer several services for CoPs, in particular Knowledge Management (KM) services based on an ontology dedicated to each particular CoPs , the so-called O'CoP. Built from information sources about each of the PALETTE CoPs, O'CoP aims both at modelling a specific CoP and at annotating the CoP own knowledge resources.

▪ PALETTE deliverable: D.KNO.05 "Extensions of O'CoP Ontology" (http://palette.ercim.org/ images/stories/DocumentPDF/d.kno.05-final.pdf). This deliverable reports several experiments of development of CoP-specific ontologies. For each CoP considered, the methods used for developing the CoP-dedicated ontology, the ontology itself and the lessons learnt form its building or from its use are reported in this deliverable. Chapter 4 and 5 of this document describe the Form@HETICE and Learn-Nett ontologies, developed for enabling the classification of the two CoPs documents through the BayFac service.

11. LOR1 – GS 'Identity building': Elaborating CoP charter and policy (CharterPolicy)

Summary
- Objective: to elaborate a CoP charter.
- Scenario: debate with the CoP members in order to reify the identity of the CoP
- Tools: SweetWiki, CoPe_it!

Objectives
The objective of this LOR is to elaborate a charter of the CoP by defining its domain, main objectives, members' general profile, main activities, projects, plans, expected outcomes, objectives of development, etc. It is related to the three generic scenarios: 'Reification', 'Debate & Decide' and 'Identity building'. The coordinator organises a debate within the CoP. This discussion can be held from time to time (once a year for example) in order to redefine the charter and take into account change in the CoP context.

This LOR can be particularly helpful for CoPs that have developed spontaneously in order to undertake as a way of reflecting on their development and planning their future direction.

Scenario
1. The coordinator with core members elaborates a list of questions to answer regarding what their CoP is and will be. An external consultant may be contacted for this. The questions can be related to:
   - ABOUT WHAT has this CoP been created? This is about the definition of the professional domain of the CoP (e.g.: teaching, engineering, computer science, etc.), and possibly the identification of its specific context (e.g.: teaching science in primary school, engineering in public building, programming in Java, etc.).
   - WHY has the CoP been created? This question is about the objectives of the CoP. They can be internal (defined by the core members for example) or external (defined by the institution or company that hosts the CoP). The CoP can also develop in practical terms the term of office defined by the institution or company.
   - WHO are the members? This is about the main expected characteristics of the CoP members (students, professionals, apprentice, or all together), their level of competencies, etc.
   - FOR WHOM? What is the audience of the CoP? Only the members or other employees of the institution or the external public?
   - HOW? What kind of activities will be organised?
   - WHEN? What will be the pace of the CoP? The activities can be organised weekly, monthly, etc.
   - WHERE? This is related to the possible blending of face to face activities and distance activities, individually at home or collectively at the work place.
   - WITH WHICH TOOLS? What will be the tools used for connecting the members, reifying the practice, communicating information, etc.? (see also the LOR3).
   - WITH WHICH POLICY? What kind of behaviours should be encouraged or avoided from the members?
2. Once a first list of questions and answers is worked out, the coordinator can organise a discussion with the members. In this discussion, the coordinator may keep in mind some issues:
   - some points are maybe not debatable, for example the term of office from the institution;
   - choosing tools sometimes leads to very long discussions; appropriate training for some members may be envisaged;
   - in case of difficult debates, votes can be organised;
   - each interested member should have the opportunity to express his/her opinion;
   - the goal of the discussion is to make choices and decisions; the coordinator will focus the debate on this objective.

Some decisions can be made unanimously. In case of debates, each member should have the opportunity to express his/her opinion. Then a vote can be organised.

3. The decisions made are written into a text that the members can read and comment until a deadline.

Tools to support activity
- SweetWiki (http://sweetwiki.inria.fr/) can be used for the collective writing of the charter.
- CoPe_it! (http://copeit.cti.gr/) can be used in order to collect the opinions of the members on the different sections of the charter.

Example of uses by CoPs
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Links to further resources
- This LOR is also in connection with the LOR1 MapCoP (Mapping your community of practice): http://argentera.inria.fr:8080/swikipalette/data/Lor/MapCoP.jsp.

5.5.2 LORs 2: Organising, managing, developing, and evaluating CoPs

We copy here the description of our model of activity (Jacquemart et al., 2008) and its scenario of use. We consider this model as a LOR supporting the reflection on and organisation of activities with a CoP.

In order to facilitate the use of the model to identify the different dimensions of activities that can occur in a CoP, we have proposed to build a three dimensions model. It is a toolbox containing different spaces that can be used for describing each CoP activity.
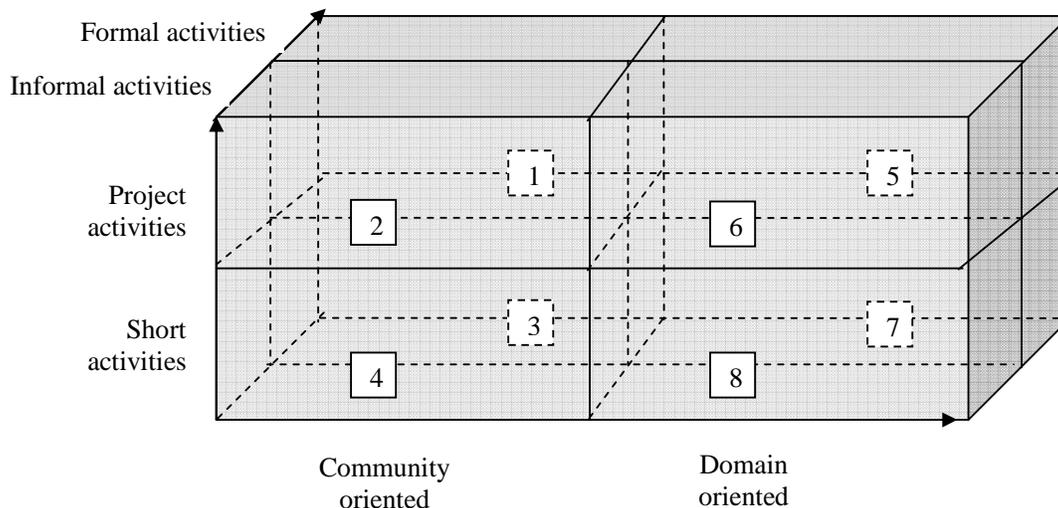

Figure 5 – Activity model 2008

The different dimensions for describing a CoP activity are divided into three axes: formal/informal, long term/short term, and community/domain oriented. We first define below these three axes, and then we present the eight areas that they form in the figure 5.

Axes definition

Axis 1: Community/Domain oriented activities

Community-oriented activities (coordination and communication)
This dimension concerns activities that aim at managing and facilitating the interpersonal relations inside the CoP. The objective is here to allow people sharing common social rules that help them to communicate, understand each other and negotiate meaning. These activities help members to build and share a collective identity. They also help them to know each other as individual, to know their individual needs, motivation to participate in the CoP, their interests and beliefs, as well as their personal objectives.

Domain oriented activities (knowledge sharing and knowledge creation activities)
This dimension of activities is about CoP members sharing knowledge, competences and practice related to their professional domain. It concerns the explanations related to tacit and explicit knowledge used by the CoP members in their practice.

Axis 2: Formal/Informal activities

Formal activities
These activities represent all the explicit activities that are organized formally within the CoP. As an example of combination between Axe 1 and Axe 2, a formal activity can be community or domain

oriented: the LOR 'YellowPage' (p. 37) can be considered as a formal community-oriented activity while the LOR 'GoodPractice' is a formal domain-oriented activity (p. 29).

Informal activities
These activities represent all the activities that are organized implicitly within the CoP or that are not organized and appear spontaneously. These activities can be related to the community or the domain of the CoP.

Axis 3: Short/Long term activities

Short activities
It includes activities that are not intended to be repeated and that have a short-term impact. They occur punctually.

Project activities
Activities that last over a long period of time and that need a calendar to be followed. They are organized in order to have a long term impact.

Eight parts model

To illustrate how to use the model, we have tried to classify different kinds of activities in the eight boxes of the model. The table below summarizes the different characteristics of each activity:

		Community-oriented	Domain-oriented
Project activities	Formal activities	1	5
	Informal activities	2	6
Short Activities	Formal activities	3	7
	Informal activities	4	8

Table 7 – Characteristics of CoP activities

To illustrate the activities, we classified the LORs we presented in this section in the LOR1 and LOR3 categories. Of course, as they are planned and formalised, they fall under the "formal activities" categories. One of the LOR "ScenariosUses" is classified both in Community and Domain oriented categories as its goal is fostering communication between the members and reification in the same time.

1. Community oriented – project – formal activities: CoP organisational development activities, shared database "Who's Who". For example, the LORs 'NeedCoP' (p. 25), 'YellowPages' (p. 37), 'MapCoP' (p. 36), 'CharterPolicy' (p. 39), 'ScenariosUses' (p. 46), 'ChoicesTools' (p. 48), 'UsesTools' (p. 50).
2. Community oriented – project – informal activities: arguing, debating about a long-term, community-oriented issue.
3. Community oriented – short – formal activities: planned CoP social events (for example, the LOR 'LearningSwot', p. 35).
4. Community oriented – short – informal activities: lunch between CoP members, exchanges between members during a break, etc.
5. Domain oriented – project – formal activities: associated activities with communicated results. Example: Project activities, shared knowledge database "who knows what", knowledge creation activities between members, etc. (see the LORs 'DefineOntology', p. 38; 'ObjectivesActivities', p. 33; 'ScenariosUses', p. 46).
6. Domain oriented – project – informal activities: informal practice-based activities such as usual discussions on specific issues without notes or reification process.
7. Domain oriented – short – formal activities: planned short domain activities (with explicitly defined inherent goals) and realization of short activities included in projects. For example, the LORs 'AnalyingLearningProc' (p. 27), 'GoodPractices' (p. 29), 'WhatHow' (p. 31), 'IndividualIssue' (p. 32), 'ActivitiesToolsScenarios' (p. 51).

8. Domain oriented – short – informal activities: spontaneous short domain activities (with tacitly defined inherent goals), punctual decisions about unplanned events and issues that have an impact on coordination of CoP domain activities. Example: defining together at the end of a meeting, during a chat session, the topics, themes, subjects to be presented for the next meetings.

Scenario for the use of the model

When a CoP member is designated as animator, coordinator, moderator or when he/she has chosen to assume one of these roles, he/she should be able to identify existing activities that happen within the CoP. He/She can also compare these activities with the CoP performance (as defined by its members). From this perspective, this model represents a diagnosis tool.

Based on the desired CoP performance defined by its members, this model can also be used to identify activities to organise in order to support community or domain development, for instance.

This model can be considered as a diagnosis and as a decision-making tool as well.

5.5.3 LORs 3: Choosing and (individually and collectively) appropriating tools, supporting CoPs in conceiving scenarios of tools uses

Here is the list of LORs in this category. They are related to each Generic Scenario. Their Wiki short names are put in brackets.

1. Related to 'Reification':
   - 'Verba volant, scripta manent': Suggesting scenarios of uses for reification of practices-knowledge (ScenariosUses)
2. Related to 'Debate & Decide':
   - 'The tool makes the man (or does it?)': Negotiating, discussing and making decisions about the choices of tools (ChoicesTools)
   - 'The rules of the game': Negotiating, discussing and making decisions about the uses of tools (UsesTools)
3. Related to 'Identity building':
   - 'The right tool for the right job': Matching different types of activities with types of tools and scenarios (ActivitiesToolsScenarios)

1. LOR3 – GS 'Reification': Suggesting scenarios of uses for reification of practices-knowledge (ScenariosUses)

Title: 'Verba volant, scripta manent' Reification as a tool against volatile knowledge

Summary
Of all the problems that can plague a CoP, volatile knowledge and lack of efficient communication between CoP members are two of the most sensitive subjects. Fortunately, with a few good reification habits, these issues can be solved with a great efficiency.

Objectives
Help a CoP to solve the issue of the lack of communication between CoP members through discussions (face-to-face or at a distance) and promote the sharing of personal experience about their roles in the CoP. Both of these activities will lead to reification, a simple practice that is often overlooked.

Scenario
1. A member of a CoP identifies four essential data:
   ▪ the CoP spatial dispersion (are its members geographically sparse or do they all live next door? – and all possible variations);
   ▪ the CoP size;
   ▪ the subject matters that are common to all CoP members but are kept in oral tradition or in internal documents;
   ▪ the frequency of real life meetings, if any.
2. Using either a collaborative tool or during a plenary meeting (what is possible depends on the CoP spatial dispersion and size), the CoP member enrols a group of volunteers (his 'task force') with whom he works on the basis of his initial data. They refine it a bit and, for each identified subject matter, a 'head of task' is designed, depending of the volunteers' personal preferences and competencies.
3. Depending on the size of the CoP and subject matters, one same member can be the head of multiple tasks. The reverse works too: if a subject matter is particularly huge, more than one member can become head of the task.
4. Each 'head of task' writes one (or a few) articles – even incomplete – in a collaborative tool, like SweetWiki or Google Docs. These documents are pertinent to their subject matter and their goal is to be the 'building blocks' of a larger task.
5. (In some cases – e.g. very big, motivated CoPs –, this step will occur at the same time as the fourth point.) All the CoP members are invited to come and enrich the initial corpus.
6. At a regular periodicity, events are organized, from plenary meetings to simple newsletters (and, in between, face-to-face meetings of subgroups of the CoP, discussions through mailing-lists, etc.). The goal of these events is to keep the CoP members aware and motivated and not to fall in some kind of soft apathy.

Tools to support activity
▪ SweetWiki: by allowing a CoP to edit a same corpus of knowledge without needing physical meeting and with very few formal hindrance, the Semantic Wiki system that is offered by SweetWiki can help reification of practice and knowledge. Being a collaborative tool, it allows CoP members to reify their collective knowledge in a centralized, well-organized corpus. The tags/folksonomy system helps people finding the knowledge they search.

Example of uses by CoPs
Example TFT: Reification of practices-knowledge:
A previously non-formal group of nurse-teachers who were reunited under the name TFT (transition from training to work) has decided to have regular plenary meetings, with usually a precise topic as the order of the day. The topic is brainstormed during the meeting and its minutes are written on the

CoP SweetWiki by a member of the CoP (first reification level). In the next day, the subjects that were talked about during the brainstorm are expanded by CoPs members, who were present or not at the meeting (second reification level). http://argentera.inria.fr/swikitft/data/Main/CompteRendu.jsp – an example of TFT minutes

2. LOR3 – GS 'Debate & Decide': Negotiating, discussing and making decisions about the choices of tools (ChoicesTools)

Title: "The tool makes the man (or does it?)" How to negotiate, discuss and make decisions about the choice of tools

Summary
One CoP is not another: when (and if) its members need software tools or services to help them, these tools have to match their unique needs precisely, at the risk of being useless or even an hindrance to the CoP.

Objectives
To help CoPs in choosing the right PALETTE or non-PALETTE tool or service that may help them in their everyday work.

Scenario
1. A CoP decides it will need tools for its activities – a new CoP, or a CoP with the desire to modernize its practices. Its core members first establish a list of the CoP usual or potential activities – for doing so, depending of the size and internal organization of the CoP.
2. They either do it vertically (the core members are sovereign) or horizontally (by polling all the members of the CoP). As for the next points, this can be done either in plenary meetings or at a distance, with the help of
   ▪ A forum engine (phpBB, for instance)
   ▪ A mailing-list
   ▪ Instant Messenger (Google Talk, Windows Live Messenger or compatible free clients)
3. The negotiation, discussion and decision-making process itself is by nature hard to generalize, but some guidelines can be given: split the problems in as little parts as possible and brainstorm questions according to this process, for instance:
   ▪ I need a tool that I can come to grips with in less than one hour;
   ▪ I need a tool that can do most of what I do with my word processor (or any other software);
   ▪ I need a tool that can access various file formats;
   ▪ I have the time to learn a tool, and I want to learn a tool that can help me to do [...];
   ▪ I need a tool that works well with the other tool I use, [...];
   ▪ I need a tool that will amaze my audience;
   ▪ I need a tool that is often used by mathematicians;
   ▪ I need a tool which respects ISO/W3C/ECMA/[...] standards;
   ▪ I need a tool which is free software/closed source software;
   ▪ I need a free software tool, and its license must be (compatible with) the GPL, the BSD license, the CC license, etc.;
   ▪ I need a tool that can produce documents readable by my target audience/by as a large audience as possible;
   ▪ I need a tool that produces documents readable only by itself in order to promote its use.
4. Once the tool are chosen (with the help of the resources found in ActivitiesToolsScenarios), trials of the tool, with real CoP members and must be conduced in order to see if it can help modernize the CoP activities – not for the sake of modernization, but for the sake of efficiency.
5. If more than one tool has been chosen, the trial should help verifying that there is no overlapping between the tools. For instance, if two tools were pre-selected with the same goal in mind, the trial should help choosing which of the two tools is the most adequate for the CoP need.

Tools to support activity
▪ A forum engine (phpBB, for instance)
▪ A mailing-list
▪ Instant Messenger (Google Talk, Windows Live Messenger or compatible free clients)

Example of uses by CoPs
-

Links to further resources
- ActivitiesToolsScenarios
  (http://argentera.inria.fr:8080/swikipalette/data/Lor/ActivitiesToolsScenarios.jsp)

3. LOR3 – GS 'Debate & Decide': Negotiating, discussing and making decisions about the uses of tools (UsesTools)

Title: 'Thinking the negotiation' Once that tools and services have been chosen, the CoP should achieve a consensus via a negotiation process

Summary
Once that a CoP has decided which software and services can help them, its members have to negotiate a common way of using them in order to avoid the proliferation of different, incompatible or bad practices.

For this negotiation, they have to keep their unique needs in mind, which often means deciding a set of guidelines on how to use the tools and services, which features to use, which features not to use and even sometimes on which feature a catachresis is needed.

Objectives
Helping CoPs choosing the right features of the tools and services they have decided to use (in other words, decide of a usage consensus for the chosen tools and services).

Scenario
1. A CoP decides to use one or more tools or services (see ChoicesTools for a method to do so).
2. However, like it is the case with almost all computer software, these tools and services can do a lot of things, some of them being very useful, some less and some not useful at all for supporting the activities of the CoP.
3. A group of 'expert' CoP members (i.e. members who are both well invested in the CoP and accustomed to the usage of computers) test the tool(s) and service(s) and take notes on which features will be used, which features will not and which features will need to be used in a slightly different way than what was intended by the creator of the software. This can be done either in plenary meetings or at a distance, with the help of a forum or a wiki engine, for instance (as for the next two points).
4. This expert group shows the results of their works to a larger part of the CoP and explain their reasoning, taking into account the possible constructive remarks of the audience.
5. Both the notes taken in the third and fourth points are put together and formalized in a methodology guide written for the CoP members who will use these tools and services.

Tools to support activity
The negotiation process can take place, for instance, with the following tools.
- SweetWiki
- CoPe_it!
- eLogbook
- another wiki engine
- a forum engine

The end result could be formalized thanks to
- Amaya
- LimSee3 (for a visual presentation)
- a text editor
- a presentation tool

Example of uses by CoPs
-

Links to further resources
- ChoicesTools (http://argentera.inria.fr:8080/swikipalette/data/Lor/ChoicesTools.jsp)

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4. LOR3 – GS 'Identity building': Matching different types of activities with types of tools and scenarios (ActivitiesToolsScenarios)

Title: 'The right tool for the right job' Matching activities with services and scenarios

Summary
Each CoP is unique and has unique needs when it comes to tools and services they may need to support their activities (be them PALETTE tools and services or not). Finding the right tool for the right job (and using it while following a usage consensus) is the key to success.

Objectives
Allow a CoP to quickly and efficiently select the PALETTE and non-PALETTE tools and services that would help them in their practice.

Scenario
1. A CoP decides it will need tools for its activities – a new CoP, or a CoP with the desire to modernize its practices. The negotiation process is described in ChoicesTools. As for the next points, this can be done either in plenary meetings or at a distance, with the help of a forum engine or a mailing-list, for instance.
2. For each of the identified needs, there is an abundance of tools and services (PALETTE or not). They decide that a different CoP member has the task to select which tools would suit each identified need and to define guidelines for using it (see ChoicesTools and UsesTools). The choice can also be either horizontal or vertical, according to the organization of the CoP.
3. To help them, they have access to multiple resources, one of which is a table (see next subsection) organized after pedagogical goals. Various PALETTE productions (see 'Links to further resources') are available to help them further in they reflection process.
4. For each activity, a trial of the pre-selected tools and services is conduced with the CoP members that are part of the activity, or plan to join it.
5. If PALETTE tools are not the best answer for some activities, non-PALETTE can be chosen either thanks to the D.PAR.04 non-PALETTE tools section, either using one of the many online pedagogical resources for finding tools lacking is PALETTE, such as text editors, forums, instant messenging/VoIP clients, etc.

Tools to support activity
- A forum engine
- A mailing-list
- The PALETTE tools (in particular SweetWiki, eLogbook and CoPe_it!) could also be used, but since the activity is about assessing these tools, it would be an anachronism in some cases to use them before having discovered them.
- The following table helps to match activities to PALETTE tools and services :

	Amaya	SweetWiki	LimSee3	eLogbook	CoPe_it!	BayFac
Reflexive process	xx	xx		xxx	xxx	x
Reification – for one person	xxx	xx	x			xx
Reification – for others	xx	xxx	xxx	x	x	
Sharing, reuse	xxx	xxx	xxx	xx	x	xxx
Knowledge management	x	xx	x	xxx	xx	xxx
Classification of documents				xx	x	xxx

Legend of the table
X makes it possible, but with difficulty
XX makes it possible but it is not its main purpose
XXX makes it possible because it is its purpose

- Reflective process: reflections about the topics that are to be discussed in the CoP activities, but also reflections about the CoP itself, the activities to conduct, how to organise themselves as a CoP.
- Reification: Formalization of thinking, ideas, how-to and know-how, formalization of lessons learned, writing down of conclusions based on practice. Can be split in:
  - Reification – for one person: the work of writing down one's thoughts (knowledge and practice) for one's own use. For instance, a teacher takes notes on what parts of his courses worked and what parts failed.
  - Reification – for others: the work of writing down one's thoughts (knowledge and practice) for other people. For instance, a teacher publishes his notes about his pedagogical experiments, what worked and what failed.
- Sharing, reuse: activities that involve sharing knowledge and documents, activities that involve reusing documents (while modifying their contents or not).
- Knowledge management: activities that aim at managing knowledge by sorting documents, discussing their contents, adding new contents to a database, suggesting contents.
- Classification of documents: a subset of knowledge management, the classification of documents occurs when there is no discussion about the documents: the only goal here is to classify documents in order to make them available to other people quickly and efficiently.

Example of uses by CoPs
- For the ePrep CoP, reification for others has been made by a member, 'thematic referent' of the Pedagogical Innovation project inside the CoP, helped by LimSee3 developers. Together, they have built a LimSee3 module to explain CoP members how to prepare a course with LimSee3, how to play this course for students, how to prepare the post-course (see the ePrep account of this experiment – in French – on the ePrep Website http://www.eprep.org/communaute/actu_CoP/ CR240108.html).
- Inside the ePrep CoP, when the use of Amaya and LimSee3 is generalised for building courses to be uploaded on the ePrep platform, teachers will be able to share and reuse the pedagogical content available through the platform under a Creative Commons license (thanks to the standards of Amaya - XHTML/MathML/SVG - and the standards of LimSee (SMIL). At the moment, the CoP is too young for this sharable and reusable document production (there are only one LimSee3 History course and one Amaya Physics course available on the platform (see here: http://129.104.30.7/).

Links to further resources
- PALETTE deliverable D.PAR.04 (http://palette.ercim.org/images/stories/DocumentPDF/ dpar04.pdf)
- PALETTE deliverable D.PAR.07 (http://palette.ercim.org/images/stories/DocumentPDF/ d.par.07_final.pdf)
- The WP7 'service gallery' (to be published on PALETTE website)

These documents give insights from various points of view on what can be accomplished with which tools and services (the D.PAR.04 has a section about non-PALETTE tools).

6 – Trials of the LORs

For the validation of the LORs with CoPs, a 6 steps process has been followed, similar to the validation process of the scenarios with the CoPs (see D.PAR.03):

1. Identifying CoPs interested in trialling some LORs (Doc. Prog. Lancaster, Did@cTIC, TIC-FA);
2. The mediator presented the LORs to the CoP coordinator and interested members. They chose a few LORs (2-3) that they would like to trial. The choice was informed by the needs and objectives of the CoP, e.g. if the CoP was interested in developing reification processes, then it could choose LORs related to the GS1 'Reification'; if the CoP needed to choose or decide how to use online tools, then it could choose in the LOR3 category.
3. Depending on the type and amount of LORs to trial, a plan was set up: who will use the LOR, with whom, how long will last the trial, etc.
4. The mediators prepared a questionnaire or planned short interviews. Information about the following questions had to be generated (these questions come from the D.EVA.02; other questions could be added by the mediators):
   ▪ Is the LOR valid, complete, consistent and realistic regarding the CoP needs, objectives and usual functioning?
   ▪ What are the direct outcomes of the use of the LOR? What are the expected outcomes in the medium/long term, for example if the CoP uses a LOR regularly for evaluating its processes?
   ▪ Why does this LOR work well (or badly) with this CoP? What are the conditions for using this LOR appropriately (the conditions may be internal to the CoP – availability of some tools, role of the coordinator, opportunity to organise meetings, etc. – or external – role of the institution hosting the CoP, etc.)?
   ▪ Does the use of the LOR enable generation of useful knowledge about the CoP? For whom, the coordinator and/or the members? What kind of knowledge?
   ▪ Does the use of the LOR participate in the achievement of the CoP objectives or meet its needs in some way?
   ▪ What are the possible effects of the use of the LOR on the CoP, its members, its organisation, its domain, etc.?
5. In addition, the CoP coordinator gave a direct feedback about the description of the LOR.
6. Finally, the mediators amended the LOR by editing the appropriate files in SweetWiki, especially by adding information in the section 'Examples of uses by CoPs'.

For each CoP having trialled a LOR, a validation account has been written. They are presented in the next three sub-sections. Their purposes are:
▪ To report how the validation process occurred (organisation, participants, questions asked, etc.);
▪ To summarize the participants' answers to the validation questions;
▪ To discuss the results by proposing further developments of the LOR (scenario, tools used, description of a use by a CoP, further resources, etc.).

Each account is structured as follows:

1. Organisation and participants: how the validation process has been organised (LOR that has been tested, meetings organisation, participants, etc.) and specific method for generating data (questionnaires, interviews or group discussion, etc.).
2. Validation questions (see here above).
3. Summary of the answers: summary of the participants' answers for each question.
4. Discussion: regarding the answers provided to each question, to propose further developments in the tested LOR, a.o. use by a CoP, use of specific tools, amendments of the scenario, etc. Regarding the Generic Scenario that the LOR is related to, what can be said in terms of usefulness and usability?

6.1 Trials with Did@cTIC (CH)

6.1.1 Organisation and participants

The coordinators chose to test one of the LORs, AnalysingLearningProc. It was possible to test this LOR with a CoP in a face-to-face meeting at short notice without disrupting the activities planned by the CoP. Others meetings will be organised later based on other LORs.

The mediator proposed two alternatives for the trial to the CoP coordinators:
- To use the LOR exactly as it was written dealing only with "individual learning processes";
- To add two other questions ("the reasons for participating in the CoP" and "the expected outcomes") to the questions of the LOR.

The second alternative was based on the validated Outcome Space (see section 3.2 here above) and gave a more global view to the coordinators and members about the group. After a short discussion, the second alternative was chosen because it was more interesting, in particular for the coordinators. As a result, this trial combines two LORs: AnalysingLearningProc and HowWhat.

This activity was tested in three steps:
- Introduction and presentation of the schema (Appendix 3, p. 68) of the three variables during the meeting and each participant attributes a number between 1 and 5 to each part of the variables (1=strongly disagree, 5=strongly agree). The three variables and items are the ones identified in the Outcome Space (see section 3.2 here above).
- Analysis of the answers by the mediator and presentation of the results using spreadsheets (Appendix 4, p. 68).
- Feedback to the coordinators and members:
  - Each member receives the spreadsheets by email and indications how to distinguish their own answers from those of the others. In the same communication, the mediator asks the participants different questions about this activity (Appendix 3, p. 71).
  - The mediator interviews the coordinators about this activity (Appendix 3, p. 71).

6.1.2 Summary of the answers

Unfortunately, after the email mentioned above, answers were received from the coordinators (2 persons) but not from participants. Therefore the summary which follows is based on interviews of the coordinators.

Question 1: Is this activity consistent, in terms of realistic goals, with the needs and functioning of the CoP?
The issues raised by the LOR encourage a reflexive attitude similar to that proposed within the Did@cTIC CoPs. However, people felt the activity would have been more relevant and interesting if the results had been explained and discussed in the CoP, preferably immediately afterwards. This would require a suitable technological solution to make the results available in time.

Question 2: What lessons can be learned? Would it be interesting to repeat the activity later to observe possible changes?
For the coordinator, it would be interesting to re-work the data in order to compare different participants and improve understanding of their representations.

At the creation of a CoP at the beginning of the year and also at the end after one academic year, it could be interesting because we could see if representations have evolved. This activity helps the coordinators understand expectations of participants and gives participants the opportunity to share their views. There is a risk in such an activity that the coordinator encourages participants to adopt a unified vision of the projects. The diversity of answers given should be seen as an asset rather than an obstacle.

Questions 3: Why did this activity work well or not? What are the conditions needed to use this activity (internal conditions in the CoP: the role of coordinator, organisation of a more metacognitive moment within the CoP - or external conditions: the role of the institution, etc.)?

In our case, the activity was planned and organized in a very short time. As the activities of the CoP were planned in advance, this activity was last minute addition. As a result, the conditions were not optimal for the coordinator to introduce this task.

According to the coordinators, the right conditions would have been:
- Have enough time to prepare the activity, for example, with written instructions;
- As facilitator to be clear about the goals and planning of the activity;
- To be able to adapt the language to each participant (have a German version and a French version) to avoid misunderstanding
- Have enough time during the meeting for the task and discussion of the results and ensure it does not take place at the end of the meeting when motivation is lower.

It would be interesting to think about how to adapt this activity for other conditions, e.g. virtual CoPs or/and CoPs with a lot of members.

Question 4: How did you find this activity?

It would be interesting to adapt this activity and use it to organise an additional initial meeting of the CoP to better inform participants and help them to adjust their representations about CoPs in the context of Did@cTIC. This could be an opportunity to build a shared representation. The challenge is a question of time. It is not easy to introduce this type of activity within the existing pre-planned structure and organisation of Did@cTIC. A possible solution would be to propose this activity before the planned CoP meetings or to use a part of a meeting to carry out this activity and discuss it. In our context, it would be not acceptable to use an entire meeting for this activity.

Question 5: Does this activity help achieve a goal of the CoP or meet a need, in one way or another?

This activity gives an opportunity for participants to ask questions about these variables. Otherwise, they could participate to CoPs without thinking about the role of CoPs (metacognitive role). In addition, this activity helps participants get to know the views of others. For the coordinators, the activity helps regulate the functioning of the CoP. Note that in the context of Did@cTIC, in depth information is also available in the participants' logbooks. In a CoP where the coordinator has little information about participants' representations, such an activity would be more useful.

In Did@cTIC, in addition to providing time for clear information about CoPs during an additional first meeting, it would be good to use the time also to provide information about 'intervision'.

Question 6: What interested you in this activity? Did you learn anything useful?

Personally: I became aware that many of the changes in CoPs take place at an individual level.
I was surprised at the diversity of the answers. What particularly interests me is the differences between the participants. To explore them would require a discussion with the participants.
From a different point of view, this activity could be used to present CoPs to people outside the CoP.

Question 7: What impact could this activity have on members of the CoP or its organization...?

If there is no time to explore their answers with participants, this activity has no impact on participants.

Question 8: What would be the most appropriate moment for this activity: early in the life of the CoP or later? Can you explain your answer?

This activity is most relevant to CoPs when they start, when the emphasis is on community building. It could also be used in discussion about whether to pursue the work of the CoP or not. The choice whether to introduce this activity or not depends on the CoP and its context.

Question 9: Would you recommend this activity to another CoP? Can you explain your answer?
Yes, this activity could help any CoP that wants to think about its ways of working and learning together, but it should take into account the conditions discussed (see section 6.1.3 here below) and discuss results with participants.

6.1.3   Discussion

This LOR is most relevant to CoPs when they start, when the emphasis is on community building. It could also be used in discussion about whether to pursue the work of the CoP or not. After this trial, it is possible to say that this LOR corresponds well with the Generic Scenario 3 (GS3) "Identity building" (see D.IMP.08).

The LOR is most relevant and interesting if the results are explained and discussed immediately. In this case, it would be a good idea to propose a technological solution to make the results available in time. If there is no discussion with participants of the CoP, the activity is not relevant for them. For the coordinator, the LOR helps to regulate the functioning of the CoP in particular if he has no other way to get information about participants' representations. For the coordinator, introducing a meta-level discussion about the functioning of the CoP is not easy, given the preoccupation with everyday professional practices. The participants are more interested in working on specific issues of the CoP. These are the reasons why, in this trial, the LORs "AnalysingLearningProc" and "HowWhat" were merged.

The conditions of this trial were particular, given the face-to-face nature of the work and the small number of participants. It would be interesting to consider how to adapt this activity for other conditions, e.g. virtual CoPs or/and CoPs with many members.

6.2   Trials with Lancaster Doctoral Programme CoP (UK)

6.2.1   Validation of NeedCoP and AnalysingLearningProc with the Lancaster Doctoral Programme

1. Organisation and participants

NeedCoP and AnalysingLearningProc were combined into a single questionnaire (see Appendix 6, p. 71). Items 1, 2, 4, 5, and 8 on the questionnaire were taken from NeedCoP. The final item from NeedCoP (The best thing about being involved in this group is the helping the group as a whole to develop) was left off the questionnaire because it was not seen as relevant to the Doctoral Programme. Items 3, 6, 7, 9, 10 were taken from AnalysingLearningProc. The wording of the items on the questionnaire was amended to fit with the context of the doctoral programme. In each case, the acronym 'CoP' was replaced by the word 'Doctoral Programme'; the word 'expert' was replaced by the word 'tutor'. The wording of item 4 on the questionnaire (item 2 from NeedCoP) was changed from 'My focus in participating in this group is to change how we all do things' to 'My focus on the doctoral programme is to change the ways in which we work together'. This was done to clarify the meaning of the item.

In responding to the items participants were given the additional option of indicating that an item was 'not relevant' as well as responding in terms of the strength of their agreement or disagreement. This was done in order to examine whether the questionnaire was examining processes that were relevant to this community of practice.

The questionnaire was administered electronically using 'Survey Monkey' (see www.surveymonkey.com). The link to the questionnaire was sent to members of five cohorts of the doctoral programme. Responses were received from 24 members of the doctoral programme. A summary of participants' responses can be found in Appendix 7 (p. 73). These were analysed using SPSS.

2. Validation questions

The focus of this validation was on the extent to which the questionnaire offered a way of generating useful data for CoP co-ordinators rather than for CoP participants. For this reason the validation focused on examining the questionnaire as a device for measuring the perceptions of CoP participants. For this reason the responses to the validation questions are focused on the CoP co-ordinator's experience of using the questionnaire as a way of generating data about participants' perceptions of the CoP. It focused on the questions listed earlier (see p. 53).

3. Summary of the co-ordinator's responses

Is the LOR valid, complete, consistent and realistic regarding the CoP needs, objectives and usual functioning?
The questionnaire appeared to be a useful measure of participants' perceptions. The 'not relevant' response was only used by one participant in relation to one item of the questionnaire. In general the items of the questionnaire seemed to elicit a reasonable range of responses from participants. The major exception to this was item 10 'I develop my knowledge and practices through the sharing of useful readings within the doctoral programme', which all respondents either 'agreed' or 'strongly agreed' with. This suggests that this item was not useful in distinguishing between the different perceptions of members of this CoP.

What are the direct outcomes of the use of the LOR? What are the expected outcomes in the medium/long term, for example if the CoP uses a LOR regularly for evaluating its processes?
This LOR appears to be a useful way of examining CoP members' perceptions of the way in which they engage with their CoP. Analysis of the way in which the responses to the items grouped together suggested that there were two potential scales that were forming.

The first potential scale, called 'experts', was made up of items 1, 2, 5, 6. The items on this scale focused on the extent to which participants are focused on developing their knowledge and practices through discussions with experts. This scale had an alpha reliability of 0.6. Mean responses on this scale ranged from 2.50 to 4.50 with an overall mean of 3.38 and a standard deviation of 0.67.

The second potential scale, called 'group' was made up of items 7, 8, and 9. The items on this scale focused on the extent to which participants are focused on developing their knowledge and practices through group activities. This scale had an alpha reliability of 0.56. Mean responses on this scale ranged from 2.67 to 5.00 with an overall mean of 3.73 and a standard deviation of 0.54.

Whilst given the low number of respondents these results must be treated with caution and, at best, can be seen as indicative, this gives some indication that the questionnaire is a useful way of distinguishing between CoP members' perceptions. There are two important aspects of the scales that should be noted. First, the items for each scale are drawn from both NeedCoP and AnalysingLearningProc. This suggests that in using them in this way they should not be seen as separate questionnaires. Second, there is a very weak, non-significant, negative correlation between responses on the two scales (spearman rho = -.04). This suggests that that they are orthogonal and pick up on different aspects of participants' experiences of engaging in CoPs.

Why does this LOR work well (or badly) with this CoP? What are the conditions for using this LOR appropriately?
This questionnaire seemed to work well with this CoP. In using it with other CoPs, CoP co-ordinators need to have an interest in determining the sorts of activities that will be used with CoP members. In this case a high score on the 'experts' scale would suggest that CoP activities that involve experts helping participants will be valued by CoP members, a high mean score on the 'groups' scale would suggest that group activities are valued by CoP members, a high score on both scales would suggest that a mixture of activities (either within or between particular activities) would be valued. For example, in the case of the Doctoral Programme the responses of the participants suggested that both

types of activities were valued with 'group' activities slightly more strongly valued than 'expert' activities.

Does the use of the LOR enable generation of useful knowledge about the CoP? For whom, the coordinator and/or the members? What kind of knowledge?
In the way that the LORs were used here, useful knowledge is generated for CoP co-ordinators in establishing the sorts of activities that are likely to be valued within the CoP. This knowledge could be very helpful in ensuring that the activities of the CoP meet the perceived needs of CoP members.

Does the use of the LOR participate in the achievement of the CoP objectives or meet its needs in some way?
The LOR is focused on establishing CoP members' preferences in the sorts of activities that they engage in as part of the CoP. In this way it can be used by CoP co-ordinators to design activities that will both relevant to CoP members' needs and are focused around CoP objectives.

What are the possible effects of the use of the LOR on the CoP, its members, its organisation, its domain, etc.?
As above, it can help in ensuring that CoP activities are designed that are relevant to the perceived needs of CoP members.

4. Discussion

There are four implications of the analysis above. First, in relation to the way that the LOR was used in this context, it suggests that AnalysingLearningProc and NeedCoP might be best used as single questionnaire. This combination would then represent a new LOR. Second, it suggests that item 10 may not be relevant for all CoPs. Third it suggests that the questionnaire will work best when the wording of the items are amended to fit with the context of the particular CoP. Finally, it suggests that more trialling of the questionnaire is needed before it is fully validated. At the moment the numbers of responses are too small for the suggested scales to be seen as any more than indicative. Therefore it is proposed that the questionnaire is used with a greater number of participants in a wider range of contexts before the scales are fixed in any way. For more information about the approach to data analysis in this LOR, contact Paul Ashwin (p.ashwin@lancaster.ac.uk).

6.2.2   Validation of MapCoP with the Lancaster Doctoral Programme

1. Organisation and participants

MapCoP was validated with three cohorts of the Lancaster Doctoral Programme in Educational Research. This involved a three hour face-to-face activity with each cohort that was focused on introducing participants to the notion of Communities of Practice and asking them to explore the extent to, and the ways in which, the Doctoral Programme could be considered a Community of Practice. The data for the validation were generated through semi-structured focus groups discussions at the end of the face-to-face activity.

2. Validation questions

The focus group discussions were semi-structured to allow participants to discuss any aspects of the process that seemed particularly relevant to them. This meant that each discussion had a slightly different focus depending on the experiences of the groups of participants. However the validation questions were centred around the following issues, which were covered in all of the discussions:
▪ How helpful was the LOR for introducing participants to the notion of Communities of Practice?
▪ To what extent did the LOR help participants to think about the ways in which they might work together both within their cohort, with other cohorts, and with the tutors and administrative support on the programme?
▪ Did the LOR help the participants to meet any other long or short-term needs/objectives?
▪ How well did the LOR work as an activity? What conditions are needed for the LOR to work successfully?

- What knowledge did the LOR allow participants to generate about the Doctoral Programme?
- How might the LOR impact on the participants' long term activity on the Doctoral Programme?

3. Summary of the participants' responses

How helpful was the LOR for introducing participants to the notion of Communities of Practice?
The participants indicated that the LOR had been helpful in introducing them to the notion of Communities of Practice. They indicated that in applying the concepts to their own learning context helped them to think about the particular meaning of 'domain', 'community' and 'practice' within this context. This helped them to think about the different meanings these terms could take on in different contexts. However, there was some discussion about the relevance of the notion of 'Communities of Practice' in formal educational settings.

To what extent did the LOR help participants to think about the ways in which they might work together both within their cohort, with other cohorts, and with the tutors and administrative support on the programme?
The participants indicated that the LOR helped them to think strategically about how they might work together on the programme to develop their practices. There was some variation in whether participants saw this in terms of their practices as students on the programme, in which case they were mainly focused on support from other students, or in terms of their practices as educational researchers, in which case they tended to include the tutors on the programme in the community. Some participants indicated that experiencing this variation in seeing the community as a 'community of students' or 'a community of researchers' offered them a greater variety of ways of conceptualising the Community of Practice and thus a number of different ways in which participants could work together. There was also a discussion of the extent to which the community of practice could be seen as hierarchical and, if so, where the different roles of tutor, student, and administrator were positioned within the hierarchy. Some participants indicated that this helped them to think about issues of power within the doctoral programme.

Did the LOR help the participants to meet any other long or short-term needs/objectives?
Some participants indicated that the LOR was helpful in highlighting the different forms of support that were available on the programme. It also helped them to get to know the different members of their cohort and to understand their aims in engaging with the doctoral programme.

How well did the LOR work as an activity? What conditions are needed for the LOR to work successfully?
The LOR seemed to work well as an activity. The participants were familiar with the notion of 'Communities of Practice' and so found the initial reading from Wenger easy to engage with. Feedback from the participants suggested that the activity would need to be amended where those involved in the activity were less familiar with 'Communities of Practice' and had less of an academic focus than participants on the Doctoral programme. The other important conditions appeared to be:
- Having sufficient time to discuss the different aspects of the Community of Practice;
- Having sufficient commitment with the group to being recognised as a Community of Practice – it was suggested that unless participants have some interest in seeing themselves as a community then the activity would not be seen as relevant;
- Having sufficient shared practices for the discussion to include all participants.

What knowledge did the LOR allow participants to generate about the Doctoral Programme?
The activity appeared to allow participants to think about their involvement in the doctoral programme more strategically. Participants reported that it helped them to see themselves as a wider network of cohorts, tutors, and administrative support. This allowed them to reflect on how they might draw on this wider network when engaging in the doctoral programme. It also appeared to inform them about the interests and foci of their fellow students on the programme. Thus one aspect that was discussed was the extent to which participants were interested in educational research for its own sake and how much they were interested in using research to inform the development of their practices. The

recognition of these differences appeared to be important for participants to situate the contributions of their peers and tutors within group sessions on the doctoral programme.

How might the LOR impact on the participants' long term activity on the Doctoral Programme?
As the focus group discussion took place immediately after the activity, many participants felt that it was too early to consider whether it would have an impact on their long term activities on the doctoral programme. Some participants also indicated that they would not separate this activity from the other aspects of this particular module on the doctoral programme. When asked about the benefits of the module as a whole in a separate questionnaire, students focused upon how it had helped them to relate issues relating to professional practice in the educational research literature to their own practices. This, along with discussions of the activity in the focus groups, suggested that the long term benefit of the activity in this context was in giving participants an opportunity to apply the notion of Communities of Practice to their own practices.

4. Discussion

The activity appeared to work well with the three different cohorts of the doctoral programme. However, it should be noted that the activity was initially developed with this group in mind. A number of issues for adapting this activity for other kinds of communities of practice were identified:

- The reading from Wenger was appropriate for this Community of Practice. However, it may not be appropriate for communities with a less academic focus. In these cases it might be advisable to give participants a brief, non-technical introduction to the notions of 'domain', 'community', and 'practice' rather than using the Wenger piece. It is these notions that they need to have an initial grasp of in order to complete the activity;
- For the activity to work, participants need to have some investment and interest in seeing themselves as a community. Without this, it is unlikely that they will engage in the activity in a sustained manner;
- It appeared important for the person leading the activity to have a good understanding of the community. This allows them to extend the discussion of the diagrams of the participants and place them in the wider context of the community of practice. Without this understanding it is possible that the activity could result in the sharing of misapprehensions and misunderstandings about the domain, community or practices of the Community of Practice.

6.3   Trials with TIC-FA and TIC-EF (B)

6.3.1   Introduction

Three LORs (Yellow Pages, MapCoP and NeedCoP) have been experimented either with the TIC-FA CoP members (N=9) or/and the TIC-EF ones (N=14). Both are learners in the first master of educational sciences. They follow specific courses on educational technology. The trials took place during face-to-face sessions in a computer classroom. The activities were proposed and animated by the CoP animator (teacher or assistant). As described hereafter, some activities were followed by comments on a SweetWiki page devoted to CoP members' reflections about the LORs.

6.3.2   Yellow Pages

Organisation and participants

This LOR has been trialled twice, first by the TIC-FA CoP members, and then by the TIC-EF CoP. They used the SweetWiki service with the goal of letting other members of the CoP know them – in other words as an identity building tool.

Summary of the answers

Is the LOR valid, complete, consistent and realistic regarding the CoP needs, objectives and usual functioning?
A common, if minimal, form is automatically generated when registering with SweetWiki, after a few fields (first name, name, and email address) are completed. It was used as the common basis and

members were told to answer the other questions in a less formal way. As a result, about 90% of the suggested questions (in the LOR) were answered (1). Members were encouraged to speak more freely than what was suggested by the questionnaire. By doing so, TIC-FA and TIC-EF members shared what they felt was interesting or important about them and did not feel compelled to answer a 'questioning'.

The second step of the scenario (2) is useless when using SweetWiki as a tool: each member's page is automatically published on the Web.

The mapping of knowledge (3) is out of objective. The need to use presentation software is nullified by the choice of a wiki tool – the information is directly available to everyone, with no need to rework it. If the pages are well tagged, relevant points concerning the members can be easily found. The keyword search can be a help, too.

The 'global view' objective (4) was not useful in this trial because TIC-FA and TIC-EF members do not declare any particular expertise in ICT for education – at least in the fields where expertise would help.

What are the direct outcomes of the use of the LOR? What are the expected outcomes in the medium/long term, for example if the CoP uses a LOR regularly for evaluating its processes?
The practice of filling a computer form to register to SweetWiki was not usual for all subjects. Some of them had already done similar things (by registering on so-called social web site, e-government sites, etc.), but it was a first for others. As such, the LOR helped to demythologize the use of a computer as a community tool.

Why does this LOR work well (or badly) with this CoP? What are the conditions for using this LOR appropriately (the conditions may be internal to the CoP - availability of some tools, role of the coordinator, opportunity to organise meetings, etc. - or external - role of the institution hosting the CoP, etc.)?
A strength of this LOR is that it is easy to do and the benefits are immediately visible and obvious. ICT-aware people noticed that it was useful in that it helped them to be known by other CoP members. Less ICT-aware people had the satisfaction and instant gratification of realizing that they did create a Web page.

Does the use of the LOR enable generation of useful knowledge about the CoP? For whom, the coordinator and/or the members? What kind of knowledge?
From the point of view of the CoP coordinator, the LOR allowed them to know CoP members in a different way. A touch of more personal information is added. This kind of 'personal' information, that the CoP coordinators usually do not have access to, can help the coordinator to better understand CoP members – for instance, if a member of the CoP has a full time job, it is easy to understand why she or he is often late or absent.

Does the use of the LOR participate in the achievement of the CoP objectives or meet its needs in some way?
While the Yellow Pages were not seen as a competence catalogue, they worked in a different way: when people publish something, they sign their contribution using links to their homepages. By clicking on the member's name, anybody can know more about the writer and his/her competences. Therefore, one can see it as a reversed competence catalogue (people first see the productions of members then can learn more about their competences).

What are the possible effects of the use of the LOR on the CoP, its members, its organisation, its domain, etc.?
Getting to know CoP members better helps the coordinator to work better with them, by using their experience or by better targeting their needs.

Miscellaneous notes about the LOR

Regarding the 'Tools to support the activity', we do not think that CoPe_it! would fit this LOR. eLogbook can be used, but the service is a bit too demanding for a task whose first merit is to be easy. If can be used if other features (i.e. not only user profiles) are also exploited in this environment.

'Example of uses by CoPs can be found in the homepages of members at http://sweetwiki.inria.fr/swikiulg/data/Tools/SearchBy.jsp?type=allusers. Please note however that not all the listed users are members of TIC-EF or TIC-FA '08, since it is a more general SweetWiki instantiation (for all ULg members).

6.3.3   MapCoP

Organisation and participants

One CoP, TIC-FA, trialled this LOR. The audience had been informed about the PALETTE project and the existence of LORs for a few weeks. As a group of trainees, they were encouraged to think about whether they were a CoP (yet) or not. They were talked about the theory of CoPs, through various sources and comments of Wenger's work. After a few weeks, when the theory had been explained, they lived the LOR in sub-groups during a face-to-face session. The scenario was played as presented, with nine members. Groups of three were made instead of groups of four (more logical with nine members).

Summary of the answers

Is the LOR valid, complete, consistent and realistic regarding the CoP needs, objectives and usual functioning?
There were two major problems with the text: first and foremost, its language (English) and second, its prohibitive length. The first thing the groups managed to do is to find translations and summaries of the theory, rather than use the provided link.

The way the 'map or diagram' was understood was not as expected in two of the three groups. When one of the productions was effectively a diagram, the two other were metaphorical drawings. The first one represented a whale with its organs and surrounded by fishes and other sea animals. The second one presented a mountain rescue scene. Both drawing, however, had a meaning and had been commented in a valid way by TIC-FA members.


**Figure 6 – Picture produced by a TIC-FA sub-group while using MapCoP**
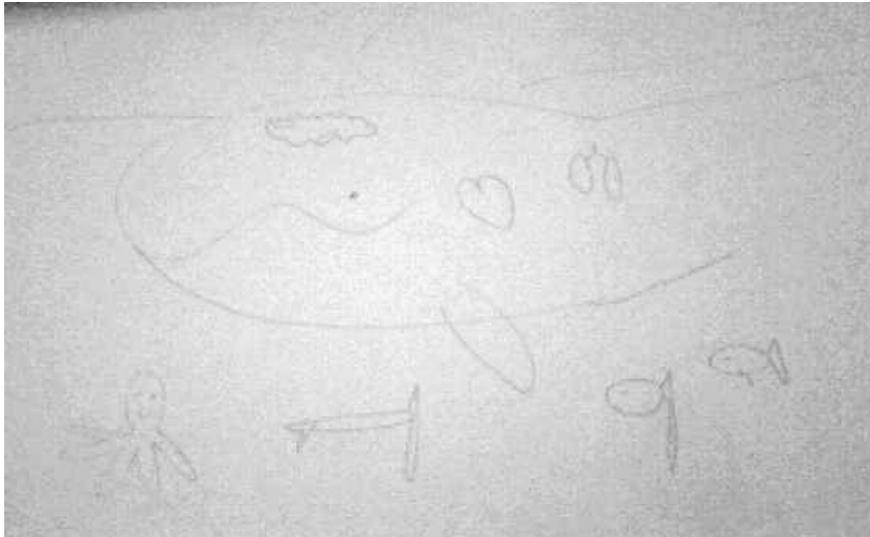
Figure 7 – Picture produced by a TIC-FA sub-group while using MapCoP

What are the direct outcomes of the use of the LOR? What are the expected outcomes in the medium/long term, for example if the CoP uses a LOR regularly for evaluating its processes?
Does the use of the LOR participate in the achievement of the CoP objectives or meet its needs in some way?
After the activity, TIC-FA members felt more like a CoP than before it (we noticed that when analysing what they wrote in their logbooks). As for the mid to long term, they will be frequently asked to talk about their feeling of belonging – or not – to a CoP in their logbook.

Why does this LOR work well (or badly) with this CoP? What are the conditions for using this LOR appropriately (the conditions may be internal to the CoP - availability of some tools, role of the coordinator, opportunity to organise meetings, etc. - or external - role of the institution hosting the CoP, etc.)?
The choice of the terms 'central community members' and 'periphery' were badly felt, as pejorative words, by two of the three groups. People who know themselves do not want to label their friends or colleagues as 'peripheral', which they felt was insulting. They emphasized the fact that they are all equal and that each one is contributing to the community at the height of their means. There is work to do to rewrite this part of the LOR. One suggestion was not to use sentences, but to allow people to point their place in a concentric circles diagram.

Does the use of the LOR enable generation of useful knowledge about the CoP? For whom, the coordinator and/or the members? What kind of knowledge?
Part of what made the success of the LOR trial was that the group had been exposed for a few weeks to the notion of CoP. Without that, the exercise would have been perceived as too academic: 'read the text and comment'.

It is also noteworthy that the audience was accustomed with pedagogy. In no way a group of professionals of other fields would have read such a long, complex and written in a foreign language text.

What are the possible effects of the use of the LOR on the CoP, its members, its organisation, its domain, etc.?
It is too early to answer this question. The members begin too feel that they are a CoP, but this kind of prediction is impossible right now.

Miscellaneous notes about the LOR

The CoPs animators noticed that:
▪ A summary is lacking.
▪ A few WikiWords leading nowhere are still present in the text.
▪ In the tools to support the activity, an online translation service would be useful.

A suggestion would be to work with a short presentation (five or six slides) of the CoP theory, focusing on the key concepts.

6.3.4   NeedCoP – ObjectivesActivities

This LOR was not really trialled but presented and discussed with the members of TIC-FA. Members of the group had a reflection on the LOR and found that it was nearly impossible to play. Therefore, we will not be able to answer the questions, but only to provide some raw results.

Regarding the objectives of the LOR, they thought that, with regards to group dynamics and social psychology, few, if any, would dare to answer honestly to the scenario's questions. They saw the grid as a bad starting point and suggested to identify needs instead.

They identified a strong bias in the questions. Those were felt as too transparent. They thought it would inevitably lead to a social desirability bias that could only be overcome by anonymizing the answers, which would defeat the very purpose of the exercise: establish a cartography of the CoP.

A problem with the grid was the 'neutral' option. Selecting 'neutral' is not neutral since saying that one is neutral regarding a given topic is one way of taking position.

Another problem with the LOR is that it does not plan any kind of debriefing.

The LOR could probably be played by the members of a mature CoP, where everybody knows everybody and the trust climate is high. But one has to wonder if the LOR would still make sense in this context, where everybody already knows who in the CoP usually shares their experience, who usually is more passive, etc. Maybe it can help experimented members to gain a finer-grained knowledge about other member's topics of choice.

Furthermore, the LOR ObjectivesActivities was considered unable to work because it relies too much on NeedCoP results, which was not possible to be trialled in its present state. It is too fuzzy to be usable and demands a much attuned coordinator in group managing.

7 – Conclusion and perspectives

In this deliverable, we first showed how we developed two models that enable us to understand the ways in which CoPs operate. The first model gives a sense of the different ways in which CoP members experience their learning in CoPs and how this might relate to their reasons for engaging with their CoP. The second model provides a way of categorising the activities of CoPs. Drawing on these models we have set out how we developed Learning and Organisational Resources (LORs) that could be used by CoPs in order to inform their development as communities. Finally, this deliverable has reported on some trials of these LORs with three CoPs. In this conclusion we will focus on the issues that are highlighted by the overall process of developing the two models, using these models to develop resources, and validating these resources.

There are two issues that we wish to highlight. First it is clear that in the whole process from developing the models to trialling the LORs with particular CoPs, there is a shift from an abstract model to the situated use of a particular resource in a particular context. In this move from the general to the particular, it is clear that the models and the LORs need to be adapted in order to fit with the needs of a CoP working at a particular time and in a particular place. This means that as they were

trialled a number of the LORs were adapted in order to be relevant to the particular CoP and that different CoPs had quite different experiences of the same LORs. This is not a weakness of the LORs; it is rather a reflection of the inevitable adaptation of a resource to fit with a particular context. Therefore, the descriptions of the LORs in Section 5 should be seen as a starting point from which CoPs can develop their own resources rather than an end point. It is for this reason that versions of the LOR can also be found on SweetWiki at: http://argentera.inria.fr:8080/swikipalette/data/Lor/ LorHome.jsp). This allows for the ongoing development of the LORs and also offers CoPs the opportunity to share their experiences of using the LORs.

The second issue is that the validation of the LORs can also be taken as evidence of the helpfulness of the two models of CoP processes. This is because they appeared to lead to the development of resources that CoPs found helpful. The next step in the process is to consider how the trials of the LORs can be drawn upon to further develop these models. At present there are insufficient validations to allow anything other than a suggestion of how these models might be developed in the future (see section 4.3, p. 19). Whilst the models offer useful ways to think about CoP processes, it might be helpful to find ways of linking the general purposes of the CoP, the motivation of the CoP members, and ways of approaching CoP processes. It became clearer in the validations that different CoPs found different types of the processes provided by the LORs helpful and a possible future development would be to begin to map these relations. This might provide a means of developing the two generic models.

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Appendix 1 – Suggested questions for eliciting CoP members' accounts

These questions are designed to elicit responses via email or an on-line discussion forum. If face-to-face interviews are preferred the questions can be used to guide the interview, with follow-up questions based upon the CoP members' responses.

> As part of the PALETTE project [give a formal introduction to the project if necessary], we are interested in examining whether your involvement in [name of CoP] has resulted in your professional development. To investigate this, we would like you to respond to the statement below. Whilst you will be identified in order to facilitate the collection of additional data, in the reporting the outcomes of this research the anonymity of all respondents will be preserved.

What are your objectives in participating in [name of CoP]? What are you trying to achieve by participating?

Please describe an actual situation in which your involvement in [name of CoP] has led to you developing your professional knowledge and/or skills in some way. The following questions may help you to generate your description but please ignore any questions that seem irrelevant and include any relevant details that are not covered by the questions.

Where did the situation occur (on-line, in a meeting, in a classroom, in a work context)?

What did you do in the situation?

Who else was involved in the situation? What role did they play?

How did your professional knowledge and/or skills change as a result of the situation?

What was it about the situation that made you feel that you had developed your professional knowledge and/or skills?


Appendix 2 – Common guide for the analysis of the learning accounts

The steps for the initial analysis we suggested are from the process suggested by Åkerlind (2005):

1. Select a number of the learning accounts to analyse. We would suggest that you start with five accounts from two or three different CoPs and then conduct further analysis if you are able.
2. Read through these accounts and familiarise yourself with the different accounts.
3. After familiarising yourself with the accounts, for each account answer the following questions:
   a. When and where is the learning taking place?
   b. Who is learning (an individual? a group? what is their role in the CoP?)
   c. What is being learnt? (new knowledge? a skill? a new way of approaching a problem?)
   d. How does the learning environment support or hinder the learning (who else is involved? are any tools used to support the learning?)
   e. What are the learning outcomes? (what has changed because of what has been learned?)

4. Compare the answer to each question that you have generated from the different accounts. What appear to be the key differences across the accounts in terms of each of the questions you have answered?
5. Bring your initial analysis to the meeting for the second stage of the process.

Appendix 3 – Schema proposed to the Did@cTIC CoP
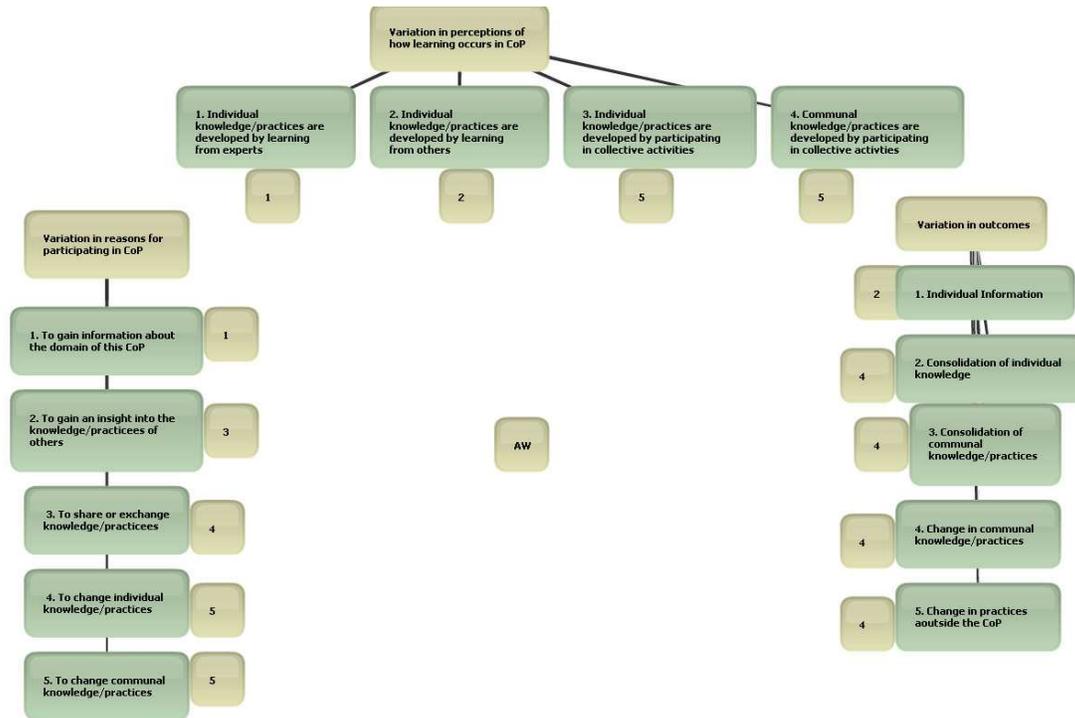
Appendix 4 – Email sent to the Did@cTIC participants

Bonjour,
Comme vous l'avez appris lors de la CoP du 8 octobre dernier, les CoPs Did@cTIC sont impliquées dans le projet PALETTE. Ce dernier vise entre autres à soutenir l'activité des CoPs. Dans ce cadre différentes activités ont été imaginées dont celle à laquelle vous avez participé.

Par le document joint, je vous transmets 3 cibles illustrant vos réponses. Vous pouvez ainsi voir dans quelle mesure votre perception est partagée avec les autres participants de la CoP. Votre contribution va servir, dans le cadre du projet PALETTE, à valider (ajuster) les activités imaginées.

Après avoir consulté les 3 cibles, j'aurais besoin de connaître votre point de vue sur l'activité. Pour ce faire, je vous propose de répondre aux quatre questions ci-dessous et de m'envoyer par mail vos réponses.

Questions auxquelles j'aimerais que vous répondiez :
1. Comment avez-vous trouvé cette activité ?
2. Quel intérêt y avez-vous trouvé ? Avez-vous appris certaines choses utiles ?
3. Quel serait le moment le plus opportun pour effectuer cette activité : plutôt au début des CoPs (comme dans votre cas), un peu plus tard ? Merci de commenter votre réponse.
4. Conseilleriez-vous de renouveler cette activité (éventuellement avec des suggestions d'amélioration) avec une autre CoP ? Merci de commenter votre réponse.

Je vous remercie d'avance de votre précieuse collaboration et vous souhaite des CoPs riches en partage et découvertes.

Pour l'équipe Did@cTIC

Annick Rossier

Document attaché lors de l'envoi du mail

Activité visant à mieux connaître comment chaque membre de la CoP bilingue perçoit :
▪ les raisons essentielles de participer à la CoP
▪ les meilleures manières d'apprendre dans la CoP
▪ les résultats essentiels attendus en participant à la CoP

Voici les 3 cibles synthétisant les réponses fournies lors de l'activité.

Vos réponses personnelles correspondent à la **lettre E**

Manière d'apprendre dans la CoP

Résultats attendus
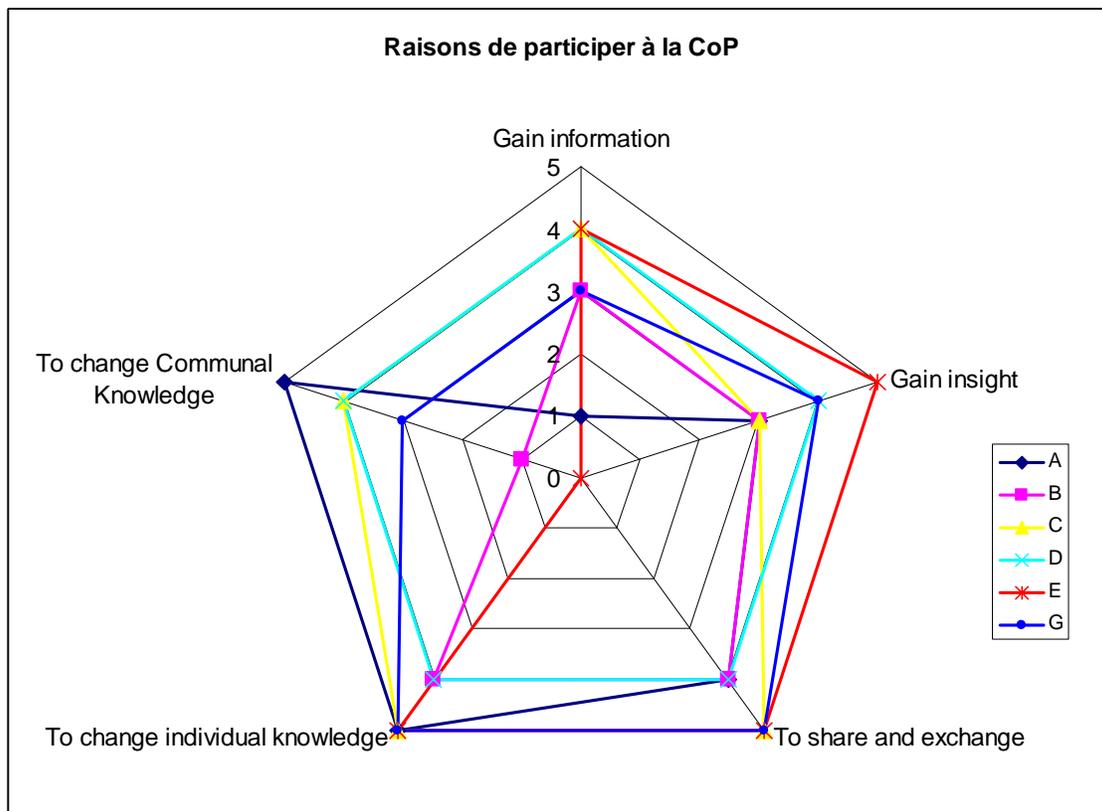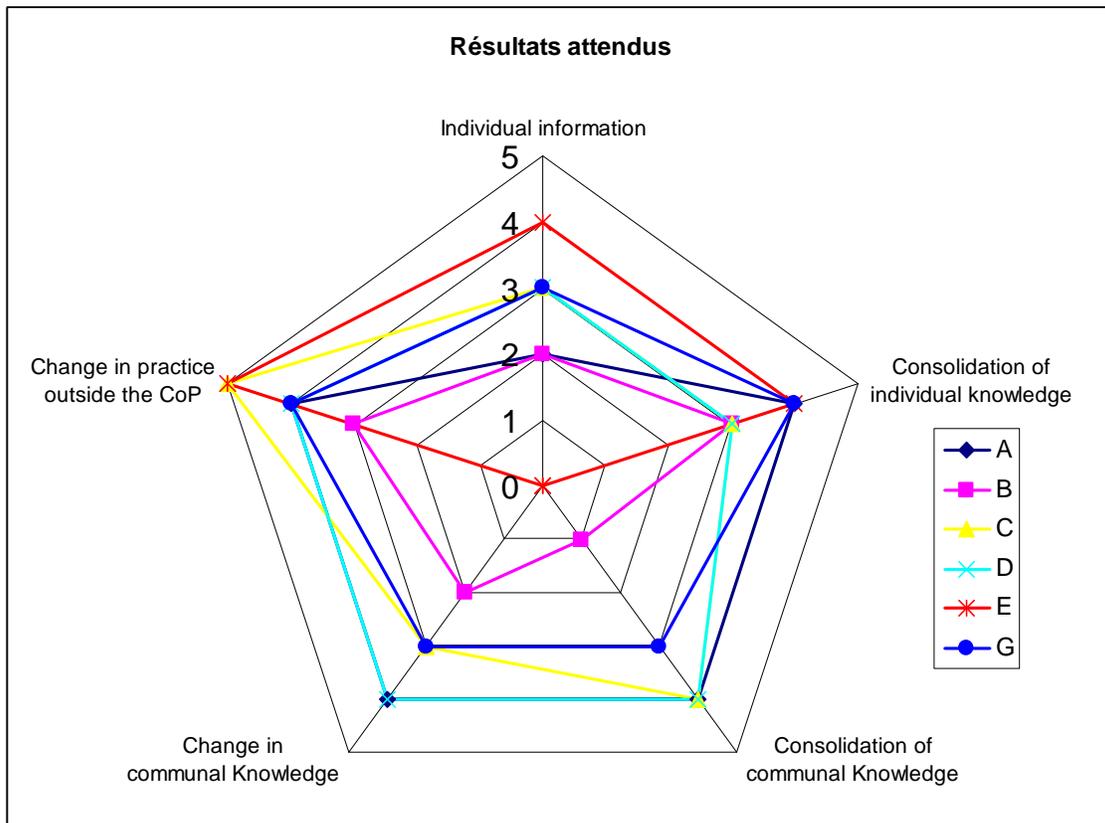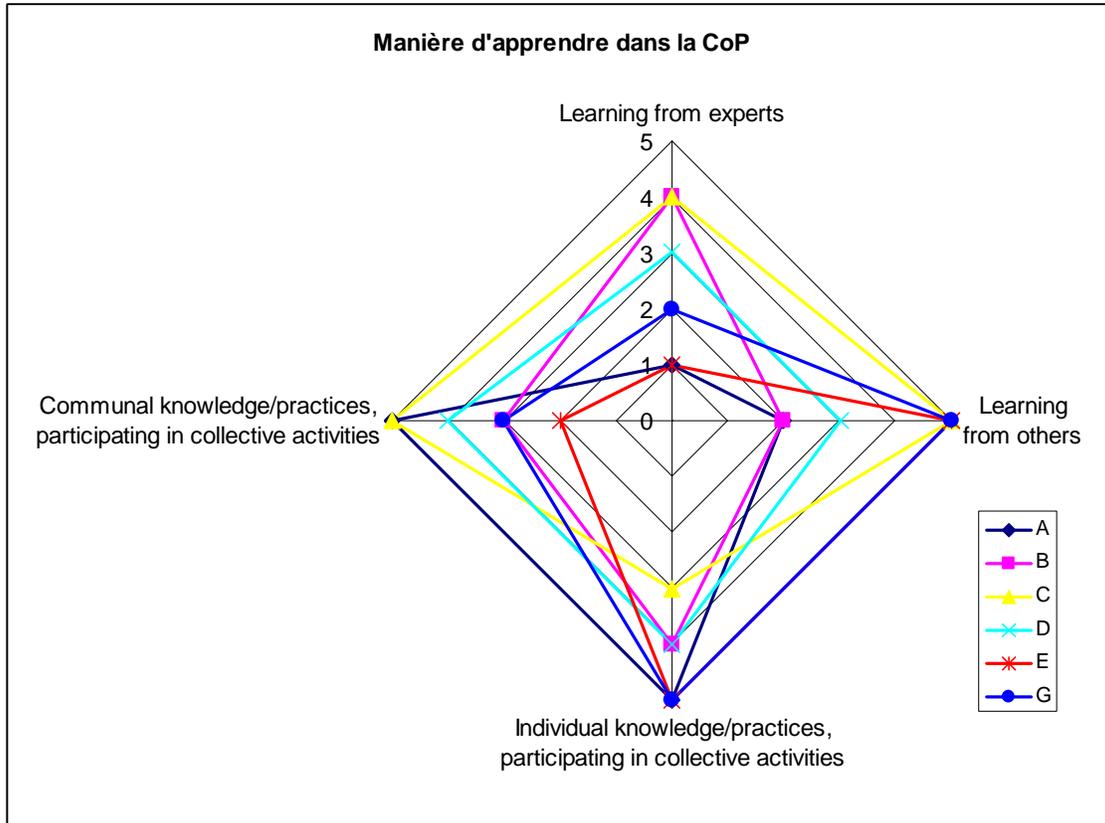
Appendix 5 – Questionnaire used with Did@cTIC for validation of LOR

Questions to the participants

1. Comment avez-vous trouvé cette activité ?
2. Quel intérêt y avez-vous trouvé ? Avez-vous appris certaines choses utiles ?
3. Quel serait le moment le plus opportun pour effectuer cette activité : plutôt au début des CoPs (comme cela a été effectué), un peu plus tard ? Pouvez-vous expliquer votre réponse ?
4. Conseilleriez-vous de renouveler cette activité avec une autre CoP ? Pouvez-vous expliquer votre réponse ?

Questions to the coordinators

1. Est-ce que cette activité est cohérente, réaliste au regard des objectifs, des besoins et du fonctionnement de la CoP ?
2. Quel est l'apprentissage direct que l'on peut en tirer, y a-t-il un intérêt à moyen/long terme si la CoP renouvelait cette activité pour observer une évolution ?
3. Pourquoi cette activité a bien ou pas bien fonctionné ? Quelles sont selon vous les conditions nécessaires pour utiliser cette activité de manière appropriée (conditions internes à la CoP – rôle du coordinateur, opportunité d'organiser un moment plus méta sur la CoP… - ou externes – rôle de l'institution…-)?
4. Comment avez-vous trouvé cette activité ?
5. Est-ce que cette activité permet d'atteindre un objectif de la CoP ou répond à un besoin d'une manière ou d'une autre ?
6. Quel intérêt y avez-vous trouvé ? Avez-vous appris certaines choses utiles ?
7. Quel impact peut avoir cette activité sur les membres de la CoP, son organisation… ?
8. Quel serait le moment le plus opportun pour effectuer cette activité : plutôt au début des CoPs (comme cela a été effectué), un peu plus tard ? Pouvez-vous expliquer votre réponse ?
9. Conseilleriez-vous de renouveler cette activité avec une autre CoP ? Pouvez-vous expliquer votre réponse ?

Appendix 6 – Doctoral Programme Survey. Perceptions of engagement with the Doctoral Programme

Please respond to the following items about the ways in which you engage with the Doctoral Programme

1. The best thing about being involved in the doctoral programme is the way that it allows me to change my practice.

◉ Strongly Disagree ▢ Disagree ▢ Neutral ▢ Agree ▢ Strongly Agree ▢ Not Relevant

2. Within the doctoral programme, I am more interested in developing my expertise than helping others to develop theirs.

▢ Strongly Disagree ▢ Disagree ▢ Neutral ▢ Agree ▢ Strongly Agree ▢ Not Relevant

3. I develop my knowledge and practices through informal discussions with other doctoral programme members.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

4. My focus in participating in the doctoral programme is to change the ways in which we work together.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

5. Within the doctoral programme, I am more interested in the views of the tutors than my peers.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

6. Through the activities of the doctoral programme, I develop my knowledge and practices through presentations by tutors and discussions with them.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

7. Through the activities of the doctoral programme, I develop my knowledge and practices through discussions of practical issues with the other members of the programme.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

8. I'd rather participate in shared activities than listen to what the tutors have to say.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

9. I develop my knowledge and practices through group activities within the doctoral programme

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

10. I develop my knowledge and practices through the sharing of useful readings within the doctoral programme.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐ Not Relevant

Appendix 7 – Responses to Items – Doctoral Programme Survey

The best thing about being involved in the doctoral programme is the way that it allows me to change my practice.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	8	33.3	33.3	33.3
	Neutral	4	16.7	16.7	50.0
	Agree	7	29.2	29.2	79.2
	Strongly Agree	5	20.8	20.8	100.0
	Total	24	100.0	100.0	

Within the doctoral programme, I am more interested in developing my expertise than helping others to develop theirs.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Relevant	1	4.2	4.2	4.2
	Strongly Disagree	1	4.2	4.2	8.3
	Disagree	10	41.7	41.7	50.0
	Neutral	4	16.7	16.7	66.7
	Agree	8	33.3	33.3	100.0
	Total	24	100.0	100.0	

I develop my knowledge and practices through informal discussions with other doctoral programme members.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	8.3	8.3	8.3
	Neutral	1	4.2	4.2	12.5
	Agree	13	54.2	54.2	66.7
	Strongly Agree	8	33.3	33.3	100.0
	Total	24	100.0	100.0	

My focus in participating in the doctoral programme is to change the ways in which we work together

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	4.2	4.2	4.2
	Disagree	11	45.8	45.8	50.0
	Neutral	6	25.0	25.0	75.0
	Agree	5	20.8	20.8	95.8
	Strongly Agree	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

Within the doctoral programme, I am more interested in the views of the tutors than my peers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	8	33.3	33.3	33.3
	Neutral	8	33.3	33.3	66.7
	Agree	6	25.0	25.0	91.7
	Strongly Agree	2	8.3	8.3	100.0
	Total	24	100.0	100.0	

Through the activities of the doctoral programme, I develop my knowledge and practices through presentations by tutors and discussions with them.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	4.2	4.3	4.3
	Agree	11	45.8	47.8	52.2
	Strongly Agree	11	45.8	47.8	100.0
	Total	23	95.8	100.0	
Missing	System	1	4.2		
Total		24	100.0		

Through the activities of the doctoral programme, I develop my knowledge and practices through discussions of practical issues with the other members of the programme.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	4.2	4.2	4.2
	Agree	12	50.0	50.0	54.2
	Strongly Agree	11	45.8	45.8	100.0
	Total	24	100.0	100.0	

I'd rather participate in shared activities than listen to what the tutors have to say.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	4.2	4.2	4.2
	Disagree	7	29.2	29.2	33.3
	Neutral	12	50.0	50.0	83.3
	Agree	3	12.5	12.5	95.8
	Strongly Agree	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

I develop my knowledge and practices through group activities within the doctoral programme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	4.2	4.3	4.3
	Neutral	2	8.3	8.7	13.0
	Agree	16	66.7	69.6	82.6
	Strongly Agree	4	16.7	17.4	100.0
	Total	23	95.8	100.0	
Missing	System	1	4.2		
Total		24	100.0		

I develop my knowledge and practices through the sharing of useful readings within the doctoral programme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	11	45.8	45.8	45.8
	Strongly Agree	13	54.2	54.2	100.0
	Total	24	100.0	100.0	