

Negotiations of Meaning with MOODLE: Concept, Implementation & Experiences¹

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Abstract. In this chapter we present a design for an e-collaboration environment and its implementation with MOODLE within the context of a research knowledge network at our university. In the first part, after a short introduction of our constructivist knowledge model, we present our idea of what we call a “design for meaning”, explaining its theoretical foundation and developing its conceptual features. In the second part we show how we have implemented this concept with Moodle for supporting a community-based knowledge network of researchers at our university and reflect on the experiences that we have collected during this 3 years pilot project.

Keywords: Community of Practice, Negotiation of Meaning, Weak Ties, Knowledge Management, Knowledge Cooperation, Knowledge Networking, MOODLE, Radical Constructivism, Facilitative Leadership, Knowledge Flow, Participation, Reification, e-Collaboration, e-Practice.

INTRODUCTION AND BACKGROUND

For many years after its foundation in 1998, research activities at our university – the Swiss Distance University of Applied Sciences (FFHS) – have been too much isolated in the departments; at the same time human resources were dispersed, research knowledge did not flow enough, projects were small and less recognised, know-how got easily lost and research tools’ development was too slow. In fall 2005 FFHS appointed me as director of the research department with the most urgent task of solving this problem.

One of the first activities of my team was a simple, but powerful analysis that consisted in distinguishing defects, their causes and measures leading to these causes (Fig. 1); this tool gave us a very helpful insight in some essential reasons for the defects and lead to a set of hypotheses for a possible solution.

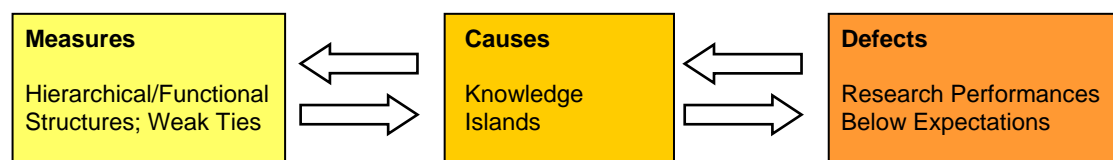


Fig. 1: Defects analysis (⇐ is caused by; has consequence ⇒)

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We found that what we had to focus on as a primary source of the defects, was the combination of 3 elements that were characteristic for our academic institution: traditional hierarchical structures, functional divisions based on course subjects and a radically decentralized organization characterized by weak ties (Granovetter 1973, 1983) . By generating a highly dispersed set of “knowledge islands” (Probst et al. 1999) this combination had negative consequences on the flow of knowledge and this again was to a large extent responsible for the insufficient level and quality of research performances.

Based on this defects analysis, the first hypothesis was that if we could increase and improve the knowledge flow, then also research performances would improve. But how to make knowledge flow better under conditions of weak ties and given a traditional structure of the organization with hierarchical levels, functional divisions and a conventional “command & control” approach to corporate governance and management?

The objective of this chapter is to sketch the solution that we developed, an e-collaboration environment, by focusing on its central design principle and by presenting several examples of its implementation.

The discipline of Knowledge Management (KM) has been dealing with the issue of knowledge flow for almost 20 years since the end of the 1980’s decade and particularly the domain of knowledge networking seemed at first sight to be most suitable to our configuration as a radically distributed organization. After some pioneering publications and many implementations in the second half of the 1990’s (Schmitz & Zucker 1996), Knowledge Networking became a focus of research in the beginning of the new millennium (Graggober et al. 2003; Lembke et al. 2005; Back et al. 2006); this work covered a wide range of issues like for example: the proposal of global knowledge networks as a way to a more equitable society, the investigation of how to institutionalize knowledge networks in companies, the analysis and design of innovation networks, the role of ICT for enabling and the collection of best practices for facilitating knowledge networks.

Unfortunately in all these and similar investigations an essential component was missing or not explicitly stated and discussed: the fundamental principle or view that every person is inseparably bound to his or her (tacit) knowledge (Bettoni & Schneider 2002, 2003, Bettoni 2005).

The problem of “knowledge islands” is usually considered a very common and well known problem. Conventional organizations rely on two complementary ways for doing well their job: hierarchical levels (task subordination) and functional sectors (task domain). Their combination leads to clearly separated organizational entities (OE): these individual entities are valuable for accomplishing tasks and limiting information overflow but they also limit (and hinder) the knowledge flow. The problem seems to be clear and knowledge networking seems a good solution; but all approaches that have been proposed have failed in recognizing one essential aspect of this problem: that tasks and information can be easily separated from a person but tacit knowledge is inseparably bound to his or her owner. As a consequence, when the dominant approach to management is transferred to knowledge networking, it creates a fundamental conflict that it cannot resolve: “*How can the employee pawn his knowledge to the enterprise without doing harm to himself?*” (Bettoni, Clases & Wehner 2004).

CONSTRUCTIVIST KNOWLEDGE MODEL

The foundation of the mentioned principle that “*every person is inseparably bound to his or her tacit knowledge*” is Radical Constructivism (von Glasersfeld, 1995), which anchors the concept of knowledge more than ever in the human being (individually and socially). Under its influence knowledge and learning theory are moving from cognitivism and instructional design towards a more human-centered view of knowing and knowledge. For example according to Wenger et. al. (2002, pp. 8-10) the essence and uniqueness of knowledge is based on four central points:

- Knowledge lives in the human act of knowing
- Knowledge is tacit as well as explicit

- Knowledge is social as well as individual
- Knowledge is dynamic.

Accordingly knowledge can't be reduced to an object, but has to be considered as a “human factor”.

This approach to knowledge as a human factor and not a merely economic resource, is consistent with the findings of Radical Constructivism, according to which knowledge can be characterized by four main features:

- inseparable (tacit knowledge constitutes identity)
- autopoietic (doing creates being),
- constructive (the How determines the What) and
- objective (the logic of experience validates experience).

It is by taking seriously these characteristics then we can also reach an insight of huge importance for knowledge management: that tacit knowledge must not be separated from and dispossessed to the individual or group, which are creating and cultivating it. Why must the knowledge owner of tacit knowledge not be dispossessed? Because whereas explicit knowledge is something we «have», tacit knowledge is something we «are» and which therefore constitutes our identity. Dispossessing knowledge is then the same as negating the individual who owned it. The owner of knowledge (individual or group) cannot and should not be dispossessed of her tacit knowledge but should instead be recognized as the central agent from which decisions influencing quality, availability, access, use and other aspects of tacit knowledge depend.

Knowledge processes therefore cannot be cultivated in the same way as working or performing processes. The insight into the difference between the mode of having and being in regard to knowledge shows this very clearly. In knowledge management we are facing a similar dilemma as in life dealing with both basic attitudes towards human existence (Fromm, 1976): the one of having and the one of being.

KNOWLEDGE NETWORK AS A COP

Knowledge Networks can increase and improve the knowledge flow within an organization, but in order to be successful they need an interaction and collaboration approach in which tacit knowledge is respected as a constitutive element of human identity. Since, due to the mentioned reasons, we could not find in the research literature a suitable weak ties collaboration model, we developed our own approach by conceiving, creating and cultivating CoRe (an acronym for **C**ommunity of **R**esearch), an intra-organizational knowledge network of researchers (academic staff, students) organized as a community of practice (Wenger 1998, 2002) connecting its members around the common task of *collaboratively stewarding research knowledge* and modeling their interactions with a “Knowledge Cooperation” approach (Bettoni 2005; Bettoni et al. 2006, 2007, 2008).

Our work of conceiving, launching and cultivating CoRe was different from the traditional design and development work done for other organizational structures or knowledge management systems. Communities need to be approached like living things: working with a community of practice actively and systematically is more like cultivating a plant than like building a machine. A machine or other artificial systems are built in their final state by assembling separate parts; a plant on the contrary does its own growing from a seed and evolves. As Wenger et al. remark (2002, pp. 12-13): “You cannot pull the stem, leaves or petals to make a plant grow faster or taller. However ... you can till the soil ... supply water, secure the right amount of sun exposure ...”. Similarly for communities of practice you have to develop an environment in which they can prosper and “bring out the community’s own internal direction, character and energy” (Wenger et al. 2002, 51). Thus a CoP, like other organisms, cannot be really “developed”: working with a CoP is rather a facilitation process where an appropriate environment is created in which it can emerge, grow and flourish. For

that reason we will use in the following consistently the term “cultivation” where traditionally one would speak of “development”.

The new and most challenging aspect of our concept was the way in which we designed the connection between the network members: in fact our idea – based on our constructivist view of knowledge (von Glasersfeld, 1995) - was to connect them around the common task of stewarding their research knowledge in a participative way (Bettoni, 2005).

DESIGN FOR MEANING: WHAT IS IT?

This raised the new and challenging research question of how to get and maintain a lasting engagement in a community of practice whose members have to collaborate under conditions of weak ties. One of the most common approaches to engagement in organizations is to look for incentives, for motivation (Bettoni et al. 2003). This may be a useful perspective in many organisational development initiatives, but in the case of community-based knowledge initiatives we claim that is not enough: the incentives view on engagement should be extended by a complementary and at least equally important consideration of the issue of “meaning”.

In fact our knowledge is of course strongly related to motivation but probably much more intimately connected and directly influenced by our experience of meaning. More specifically our claim is that if we want to get enough engagement for stewarding knowledge in a community of practice, then we need to:

- better understand the human experience of meaning (in KM tasks)
- extend our community design by a design for meaning (in KM tasks).

A basic aspect of our engagement is that we thrive for experiencing our actions, our practice as meaningful; we do not simply want to get something done (a report written, an event organized, a request answered, etc.): what counts in what we do is always more than the result, it is the experience of meaning connected with that result. In the end the meaning we produce matters even more than the product or service we deliver.

The kind of meaning involved here is an experience of everyday life, the experience that what we did, are doing or plan to do “makes sense” to us. But how do we operate to produce these meanings and to put them in relation to the histories of meanings of which they are part? In his investigation of this issue Wenger (1998, p. 53) introduces the notion of negotiation of meaning as “the process by which we experience the world and our engagement in it as meaningful.” This process has the following characteristics:

- an active, dynamic, historical process
- it affects the elements which shape it
- the meaning we experience is not imposed, it is produced, but not from scratch
- the meaning we experience is not pre-existing and not simply made up
- the meaning we experience does not exist as an independent entity outside the process
- the meaning we experience exists in the process (in fieri).

Which elements are necessary for constituting a process with these characteristics? Wenger proposes a model which distinguishes two constituent processes:

- 1) a process embodied in human operators, called participation;
- 2) a process embodied in an artificial operand (artefact), called reification.

The human operators contribute to the negotiation of meaning by their histories of interactions in the practices of a community. The artificial operand contributes to the negotiation of meaning by reflecting aspects of the practice of the community (histories of transformations). Thus the negotiation of meaning takes place as a convergence of two histories, that of the human operators and that of the artificial operands.

In Wenger’s model participation is conceived as: a) the social experience of living in the world in terms of membership in social communities; b) active involvement in social enterprises. In the same model reification is seen as the process of giving form to our understandings, experiences, practice by producing objects which express them. Writing

down a law, producing a tool or even even putting back a book in a shelf are examples of this process. Participation and reification are both distinct and complementary. They cannot be considered in isolation, they come as a pair. They form a unity in their duality (Wenger 1998, p. 62).

According to this model, our experience of meaning is viewed as a duality, as an interplay of participation and reification with the following implications: a) when you understand one, you should also understand the other; b) when one is given, you should wonder where the other is; c) when you enable one, you should also enable the other; d) one comes about through the other, but they cannot replace each other.

By taking seriously Wenger's theory and appreciating its potential impact on knowledge management we can now deduce the following **main guideline for our design for meaning**:

if meaning as a constituent of a social theory of learning should be viewed as a duality of participation and reification, then engagement in stewarding knowledge should be implemented as a duality of two corresponding processes, in our case participation in knowledge and cultivation of knowledge.



Fig. 2: Circular processes of Knowledge Cooperation

The right loop, cultivation of knowledge, is the circular process by which a community collaboratively stewards its knowledge resources (by processes like acquiring, developing, making transparent, sharing and preserving knowledge) and uses them in daily work. The left loop, participation in knowledge, is the circular process by which community members build social capital (establish and take care of personal relationships, develop individual and collective identities, etc.) and “invest” this social capital in collaboratively stewarding the knowledge resources of their community.

To conceive and implement participation and cultivation as a duality means that they should take place together, they should both require and enable each other. There should not be any cultivation without participation and no participation without cultivation.

Participation and cultivation should imply each other. Increasing the level of cultivation should not substitute an equal amount of participation; on the contrary it should tend to require an increase of participation. Cultivation of knowledge should always rest on participation in knowledge: applying knowledge requires a history of participation as a context for its interpretation. In turn, also participation in knowledge should rest on cultivation because it always involves words, concepts and artefacts that allow it to proceed.

Finally, the processes of participation and cultivation should not be considered just as a distinction between people (human operators) and explicit knowledge (artificial operands, things) that embody them. In terms of meaning, people and things cannot be defined independently of each other. On one hand our sense of ourselves includes the objects of our practice, on the other hand what these objects are depends on the people that shape them through their experiences.

IMPLEMENTATION & EXPERIENCES

The CoRe knowledge network has been cultivated at the Swiss Distance University of Applied Sciences for two main strategic purposes: 1) acquiring and realising major research

projects; 2) integrating teaching and research (Bernhard & Bettoni, 2007). CoRe connects people doing research around the common task of stewarding their research knowledge in a participative way. Viewed as a social structure CoRe is constituted by seven basic elements, seven interaction and cooperation areas which correspond to aspects of community life. The individual elements are: 1) Community, 2) Practice, 3) Domain, 4) Leadership, 5) Individual, 6) Connections and 7) Resource Development. This concept is based on Etienne Wenger's social theory of learning and on his international online workshop "Foundations of Communities of Practice".

Since CoRe is a distributed community, interactions among its members are supported by an online collaboration platform on MOODLE called "CoRe Square", a virtual space for meeting community members and collaborate for stewarding research knowledge (Bettoni, Andenmatten & Mathieu 2006). The CoRe Square platform is designed as a "community cooperation space" for research tasks: for each aspect of community life in CoRe there is a corresponding cooperation area in CoRe Square collecting a specific set of resources that support and facilitate the activities in that area.

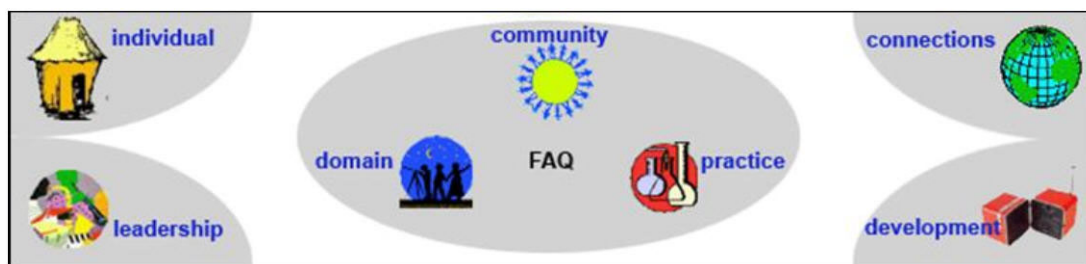


Fig. 3: Navigation to the Seven Activity Spaces of CoRe Square

Following the "design for meaning" guideline presented above, we have designed the inner structure of all these seven activity spaces as a set of "negotiation resources": each resource is a triad constituted by a forum tool, a wiki tool and a file folder tool (Fig. 4).

The forum is a tool for enabling participation in knowledge: creating new discussion threads, reading posts and replying to them supports participation as the social experience of being connected with other and being actively involved in a collective enterprise (stewarding research knowledge).

The wiki is a tool for enabling cultivation of knowledge that preserves the results of conversations (new ideas, insights, best practices, lessons learned, definitions, procedures, etc.) by organizing them in a structured way and independently of time.

Finally the file folder is a tool for storing the documents referenced either in the associated forum or in the associated wiki.

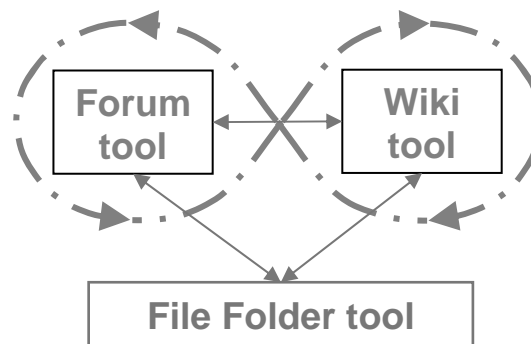


Fig. 4: – Negotiation Resource of Knowledge Cooperation

Following this design, in the final version of CoRe Square the seven activity spaces contained for example the following negotiation resources: a) *Core Team Meetings*: a forum for preparing and following up meetings of the community's core group and a wiki for

meeting agendas, minutes and other contents related to the meetings; b) *Community Rules*: a forum for developing and reflecting about community rules and a wiki for making a systematic overview of these rules; c) *Research Strategy*: a wiki for collecting an overview of issues related to research strategy and a forum for developing a shared research strategy; d) *Conferences*: a forum for planning, preparing a contribution, reflecting about conference results and an associated wiki for a systematic collection of contents related to conference work and experiences; e) *Leadership Lounge*: a wiki where members can sign up for tasks and a forum for talking about engagement for the community; f) *Individual Hut*: an own forum (“personal blog”) and an own wiki for each community member.

In the following sections we will present three of the most used negotiation resources (triads) of CoRe by sketching their background and components, describing the experiences we did and reflecting on the lessons learned from these experiences.

Core Group Meetings

During the community launch in June 2006 we identified 4 main topics for community cultivation in its first year: a) competence analysis, b) research strategy, c) incentives system and d) communication strategy. In my role as community coordinator my approach for addressing these topics was to build a strong core team and have its members work - with some support from the other community members - on the development of four community resources: a competence tool (Bettoni et al. 2007 b), a research strategy with a research plan draft, an incentives plan and an internet site about research at FFHS (Bettoni et al. 2007 c). Following a suggestion from Wenger et al. (2002, p. 88) I preferred to concentrate on making connections and fostering cooperation between core group members instead of involving peripheral members or recruiting new ones. In the first year (June 2006 to June 2007) the total amount of work (coordination, moderation, contributing contents, defining roles, organizing online events, etc.) that has been spent by the core group (which includes the coordinator) for keeping the group itself going, for cultivating the whole community (about 60 members) and updating the platform has been of about 0.8 FTE (full time equivalent) distributed over 6 persons: 3 of them each with 0.2 FTE and 3 of them with totally 0.2 FTE.

From the beginning of the core group development process the most important negotiation resource was that used for supporting regular “Technology Enhanced Meetings” (TEM). A TEM had typically 3 phases. First, in a pre-meeting phase, the core group members interacted to discuss a meeting place, a time and an agenda; people also could sign up for standard roles like facilitating the meeting or editing and publishing the minutes. In this stage the forum was used for announcing the coming meeting and discussing issues related to the agenda, the participants, the roles, the technology, etc. The associated wiki contained two main pages: 1) a “meeting calendar” which is a list of all previous meetings, with their dates and links to related minutes; 2) a “meeting agenda” with all the data of the current meeting (date, place, roles, etc.) followed by a structured list of topics to be discussed and their associated facilitators.

The second phase of the meeting was the synchronous phase for talking about the points listed in the agenda. Since we mostly could not meet face-to-face, we were happy to be able to use Skype technology: a meeting typically started in the chat window for coordinating participation and as soon as everybody was ready we added the Skype audio connection (VoIP). During the audio conversation the chat window was used for spelling words that were difficult to understand, for sharing URLs or other hints and for collaborating in writing the meeting minutes.

The third phase finally began just after closing the synchronous Skype conversation: someone collected the minutes from the chat windows and produced a minutes document that included the complete chat transcript as well as a summary of the main points and a list of tasks (who does what when). When the minutes were ready the document was stored in the “meetings” files folder, an entry was added in the meeting calendar pointing to that document and an announcement was made in the forum that the minutes were ready for download. This thread in the forum became then the place for asking follow-up questions or making comments about the past meeting, its minutes and the list of tasks.

These regular technology enhanced meetings became one of the most important means for developing the core group because it provided to its members the opportunity to experience a new way of collaborating under conditions of weak ties: combining synchronous and asynchronous conversations, making summaries of conversations, storing documents, collaborating online on the development of a document and using a coordinated set of Web 2.0 tools.

Community Rules

After a few months of regular interactions within the core group of CoRe, members of this team reflected on their contributions to asynchronous conversations in forums and realized that they had collected some shared ideas about how to make the best use of this tool; this emerged when they compared formal aspects of postings (like subject line, opening posting, discussion thread, length of posting, multiple subjects in one posting, language, netiquette, etc.), discussed different use cases and identified good practices among the instances they had compared.

For example the subject line was handled basically in two ways: 1) as if it were the subject line of an email; 2) as a title in a newspaper article. In the first case a posting that was an answer to an existing posting received the same subject line as this one: this is what most people do, when they answer an email. It works well in an email box, but in the forum the consequence was that a discussion thread with say 3 sub-threads and 12 postings had 3 ramifications and 10 contributions that at first sight (when looking at the discussion in the outline format) were identical; thus orientation within the discussion and its threads became more difficult because the subject line could not be used as a navigation support. On the contrary, when each subject line was written as a title in an article, i.e. like a pointer to or a summary of the essence of what was said in the text, then the 3 ramification and 10 contributions could be easily identified and contributed by that to improve orientation and by that increase the efficiency in reading and writing.

During a core group meeting, after discussing these experiences, one member suggested that she could summarize our experiences by setting up a draft of “Forums Rules and Suggestions”, a collection of policies (a standard that all members should follow) and guidelines (more advisory in nature) documenting best practices on how to write to a forum.

The first question she posted to the forum was about where to place the draft: when we work individually it is mostly easy to know where to store a document, but that is no more the case when we work in a group. In a conventional setting (for example project teams) the answer is given by some fixed, traditional practices and prescriptions about communication, organization and document management, but such prescriptions do not exist in a coalescing, self-organizing group like a new community of practice, they need to be invented and re-invented depending on the situation (who is in the group, which is the context), the shared experiences (what works best, etc.) and the shared understanding.

We agreed to create a wiki-page called “Forums Rules and Suggestions” - exactly like the forum – and to put there the first draft where everybody could read and change it. After a first period of changes and related discussions the facilitator produced a revised version of the draft. It was now structured in 3 main parts: introduction, rules, examples. At the following core group meeting the new draft was presented and after the meeting the whole procedure began again proposals for modifications or new design ideas in the forum, changes in the wiki, revised draft. At the end of several of these cycles the core group agreed to produce a final version and to publish these “Forums Rules and Suggestions” in a HTML-page with a highly visible link in the “Topics Bar”, one of two main navigation areas of the platform.

Research Strategy

Many members of CoRe were engaged not only in research but also in the development of the educational program of our university; in this context one of their main tasks in the period 2006-2007 consisted in developing solutions for the integration of teaching and research in the context of new Master degree courses planned for 2009-2010. In my role as community

coordinator I saw here a chance for working on this task within the context of CoRe by offering an e-collaboration approach to strategy development.

I started a forum and in a first posting I suggested an e-collaboration approach to the definition of the research strategy for the new Master courses: asynchronous conversations in the forum, synchronous meetings on Skype (following our TEM model, see above), collaborative editing of summaries of the conversations and of other texts in the wiki and storing of documents in the related folder of CoRe Square. Initially there were only few reactions, but they were all very positive; thus the discussion started with only few participants but quickly gained visibility and a lot of discussion threads began to flourish: how to proceed, who to invite, which contents, examples from other universities, use and organization of the wiki, preparation of a synchronous meeting, vision, mission, etc.

At the same time also the wiki and the file folder began to grow with pages and documents about the profile of individual research institutes, a draft for a research vision, ideas about research fields and main research areas, links to related websites, etc. At regular intervals a summary of the conversation written by a member of the core group was posted to the forum: it was used as a milestone that closed previous discussion threads and offered to newcomers the opportunity to enter the conversation more easily.

About two months after its start the discussion came to an end when a shared draft of the research strategy for the new Master courses became available in the wiki. It was the result of a successful process of e-collaboration which had demonstrated to its participants the potential of a new way of working together but also the complexity of this way of interacting.

In a conventional meeting, face to face or virtual, the success of the meeting is measured in terms of the shared understanding that has been reached at the end; in an e-collaboration process this shared understanding is only one element of the success, the other two are shared knowledge methods (how to do the knowledge work) and shared knowledge structures (how to organize work results). And since knowledge workers (and in particular researchers) are mainly very fond of their individual knowledge methods and knowledge structures, reaching an agreement in a large group can be a real challenge.

FUTURE RESEARCH DIRECTIONS AND CONCLUSION

After one year of community life, in June 2007 we took an informal check on the community's health to see whether community building was on the right track. At that time CoRe had about 60 members, 6 of them in the core team. How had their expectations been met? What should be improved or changed? We organized the "1st Annual CoRe Conference" where we evaluated the first year's achievements and determined how to continue. We asked community members about their motivation, engagement, expected vs. obtained benefits, sense of belonging to CoRe, etc.

The results showed that the core team was well established and cohesive but the majority of the other members still felt rather isolated, disconnected and were frustrated that the resources they had requested at the launch event in June 2006 and that had been developed during the first year (mainly by the core team) had not led to the expected burst in participation. Many CoRe members expressed the need for less self-organization and more structure, more guidance and more directives (managing commitment) on how CoRe spaces and resources could be fuelled with life (Bettoni, Schiller & Bernhard 2008). With the help of this informal check of CoRe's health, the experience of the first year of CoRe can be summarized in the following three lessons learned:

- **The silent "novice"**. When members feel that their expertise level is more that of a novice than that of a competent or proficient professional, then participation in discussions can be low if people belong to a linear-active culture (Lewis 2003) like Germans and Swiss-Germans (our case): since they highly value "facts and figures" they more easily feel uncomfortable when they cannot provide them.

- **The prototype “deadlock”.** For supporting one to one interactions we had created a tool for competence analysis, visualisation and interaction called “Yellow Tool” (Bettoni, Bernhard et al. 2007b). In the first year our tool was a prototype: it needed users that *jump in* in order to be improved; CoRe members instead were *leaning back*, waiting that the tool gets improved before they use it for their interactions. Using and improving the prototype were both waiting for the other activity to finish, and thus neither ever went on: a typical deadlock that prevented people to interact, explore who is who and understand who knows what.
- **“Voluntary is not serious”.** Projects are wonderful opportunities for networking and engaging in collaborative activities that in turn can promote a strong sense of belonging. In the first year members of CoRe started a lot of research projects but did that still on an individual basis without trying to connect online with other colleagues by means of CoRe Square and thus failing to include them in their perspective. One cause for this disconnected approach could come from our Central-European education in which work and voluntary activities are strictly separated: the first considered “serious but not fun”, the second “fun but not serious”. As a consequence the idea of “volunteering for work” – like in CoRe - is intuitively and unawarely seen as not serious or even impossible.

In our interpretation these results showed a clear challenge for implementing a collaborative knowledge strategy at our university: that of balancing self-governance, self-organization and voluntary participation on one side and stronger guidance, obligatory interactions and mandatory use of tools (CoRe Square) on the other side. Thus we see a clear emergence of a tension between two opposing tendencies, autonomy and guidance. We in the core team were convinced that CoRe had made important steps forward and were confident that we would have been able to cope with the mentioned tension and challenge.

But our university’s rector saw the whole thing in a less optimistic way. He had expected a much higher satisfaction, interaction, participation of the CoRe members and much more outcome in terms of research performances. He mistrusted our “facilitative” approach to leadership within CoRe and was worried that the community would never flourish. In line with his traditional view of leadership as “command and control”, in November 2007 our rector started the planning for a complete reorganization of research, which lasted until April 2008.

CoRe hibernated for one year and awoke again in November 2008: since then it is running under the new name of “eDolphin” with a modified approach based on bioteaming (Bettoni, Schiller & Bernhard 2008) and is undergoing some essential modifications for taking in consideration not only the lessons learned from the first year but also the new organizational structures.

In a recent article Barry Libert (2008) reflects on the changes that he has seen taking place since 2001 in the area of e-collaboration and social technologies and concludes with the belief that the future core competency will be “facilitative”, not “command and control” leadership.

Our experiences with the implementation of our “design for meaning” fully confirm this belief. In future, business value will depend not only on the quality of knowledge and of its application in business processes but will also be more and more influenced by the quality of knowledge collaboration, particularly e-collaboration. In this context facilitative leadership - e.g. the ability of an organization, of a group and of a leader to follow others and meet their needs and not the reverse (Libert 2008) - will become an essential success factor.

For the moment facilitative leadership is an art: in order to develop it into a competence that can be taught, learned and applied future research is needed that will show us how to lead in a consistent way three kinds of interrelated “negotiations of knowledge”: negotiations of meaning, negotiations of knowledge methods and negotiations of knowledge structures.

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