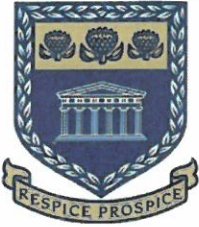




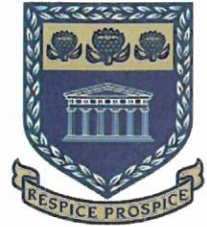
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Proceedings of the 15th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning

University of the Western Cape
South Africa
29-30 November 2018



Edited by
Prof. Shaun Pather

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Role of Mediators in City and University Collaboration

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Abstract: In this paper, we analyse university and city collaboration, a research and development platform for joint activity, Innovative City -program from knowledge creation and sharing perspective. We assume that academic and city actors can be considered as distinct communities of practice (Lave and Wenger 1991) where the participants of a community share similar values, norms and practices that follow community specific dominant logics (von Krogh and Grand, 2000). We propose there is a need for mediators to enable and overcome barriers created by differing values and norms; dominant logics (see e.g. Wenger 1998; Jyrämä and Äyväri 2007). The concept of mediators is elaborated from different perspectives focusing on mediating discussions and actor roles in innovation and knowledge sharing contexts (Wenger 1998, Kauppila et al. 2011, Jyrämä and Äyväri 2007, updated 2015, Nyström et al. 2014). The findings of our analysis pointed out that there were a multitude of overlapping and intersecting communities of practice. Moreover, the mediating took place by various actors depending on the context. Our results strongly suggest that there is a need for further study to take a closer look at the respective roles and joint mediating of these various mediators and the ways different communities of practice affect the collaboration. Moreover, analysis of mediators as gate openers and interpreters, as well as the learning occurring within the actors participating in joint activity provides interesting insights both for theory as well as for practitioners.

Keywords: mediators, research and development collaboration platform, city and university collaboration

1. Introduction

The concept of mediators has been elaborated from different perspectives focusing on mediating tasks and actor roles in innovation and knowledge sharing contexts (Wenger 1998, Kauppila et al. 2011, Jyrämä and Äyväri 2007, updated 2015, Nyström et al. 2014). However, in this paper we will connect the previously identified mediator roles to the well-known knowledge-sharing framework of *ba*. *Ba* is essentially a shared place that serves a foundation for knowledge creation, one that is often defined by a network of interactions.

The concept *ba* unifies the physical spaces, virtual spaces, and mental spaces in knowledge creation (Nonaka & Konno 1998, Nonaka et al. 2000, 2001, von Krogh et al. 2000: 178). The aim of the paper is to analyze different mediator roles, how they differ at different *ba*. This allows us to build deeper understanding on the specific mediator roles and activities needed for knowledge creation and sharing, especially in the context of intersection of communities of practice. The paper thus provides new insights both on the discussions on knowledge creation, sharing and mediators.

The empirical setting of the paper is an analysis of university and city collaboration, a research and development platform for joint activity, Innovative City -program. We assume that academic and city actors can be considered as distinct communities of practice. In communities of practice participants of a community share similar values, norms and practices (Lave and Wenger 1991). We propose that there is a need for mediators to enable and overcome barriers created by differing values and norms and community specific language (see e.g. Wenger 1998).

In this paper we first elaborate the theoretical context and discussion on key model of knowledge creation, sharing and learning adopted; *Ba* and community of practice (Nonaka et al. 2000, 2001, Lave and Wenger 1991, Jyrämä and Äyväri 2007, 2015). Next the research design and methods are presented followed by analysis with adopted models of community of practice and SECI -model, different *ba*'s. The paper concludes by presenting key findings and managerial and theoretical contributions.

2. Theoretical perspectives

In this paper we elaborate the co-creation of knowledge and knowledge sharing at the intersection of differing communities of practice through different perspectives, namely the communities of practice (Lave and Wenger 1991), knowledge creation and sharing (e.g. von Krogh et al. 2000, Nonaka et al. 2000, 2001) and mediator roles (Jyrämä and Äyväri 2007, 2015). In our analysis, we wish to treat these concepts as compatible, as tools of knowing. We thus use the concepts of ba and communities of practice as tools in analyzing process and contexts where the mediating in between communities of practice takes place enabling knowledge creation and sharing.

The theoretical focus of the paper is the context of knowledge sharing; ba and community of practice, and facilitation of sharing through understandings created in mediator discussion. We adopt constructionist perspective on knowledge, where it is socially constructed and based on experience. It is not universal; but subjective, context-specific and relational, continuously re-created and re-constituted in social interactions (e.g. Nonaka et al., 2001; Swan et al., 1999; Tsoukas, 1996). The elaboration on conceptualizations of knowledge have often been through dichotomies, such as tacit vs. explicit; transferring vs. sharing; possession vs practice (see e.g. Polanyi 1966, Nonaka et 2001, Newell et al 2006). In line with our adopted perspective on knowledge, we focus on knowledge sharing, and looking knowledge more as practice than possession, yet elaborate through both tacit and explicit dimensions of knowledge, in SECI model.

2.1 Ba and community of practice as knowledge creation and sharing contexts

The conceptualization of community of practice originates already from late 1980's and early 1990's. In the nominal work of Lave and Wenger (1991) and later elaborated by Wenger (1998, 2000), the community of practice becomes a much used tool to understanding learning or, as we suggest in our paper, co-creation and sharing of knowledge. The verb 'to learn' if looked to defining by dictionary means 'to gain knowledge of or skill in, by study, practice or being taught' (Hornby 1974: 487). Thus, it includes two aspects: first, the acquisition of skill or expertise and second, how a learner conceptually understands and applies that learning, i.e. know-why (Kim 1993). However, we wish to emphasize the dynamic nature of learning and adopt the following understanding about learning: "Learning is the *process* of creating knowledge". Hence, we connect learning explicitly to knowledge creation. In addition we wish to point out the view of learning as social process, which can occur in everyday activities, too (see e.g. Araujo 1998, Gherardi 1999). This thus emphasizes the focus of our study, co-creation and sharing of knowledge, the importance of (social) interaction. It is important to point out that building on previous discussion (Jyrämä and Äyväri 2007), we do not perceive the concept of ba and the SECI model (e.g. Nonaka and Konno 1998) and the communities of practice (e.g. Wenger 1998) as "the same", but rather as different tools to analyze different aspects in knowledge sharing and the mediator roles.

The ba has as the main element the spiral nature of knowledge and the dual form of tacit and explicit knowledge. This dual nature of knowledge has been extensively discussed (see e.g. Polanyi 1966, Nonaka et al. 2000, 2001). Through the SECI model discussion moves from reflecting the nature of knowledge creation to building a model for analysis and knowledge sharing and management. The SECI models is based on four types of ba: originating, dialoguing, exercising, and systematizing ba (Nonaka et al. 2001). These four types of ba create the distinct stages in the SECI model. These stages can be summarized as follows: S = socialization, which is the process of converting new tacit knowledge through shared experiences, E = externalization, which is the process of articulating tacit knowledge into explicit knowledge, C = combination, which is the process of converting explicit knowledge into more complex and systematic sets of explicit knowledge, and I = internalization, which is the process of embodying explicit knowledge into tacit knowledge (Nonaka et al. 2000, 2001; see also Jyrämä and Äyväri 2007).

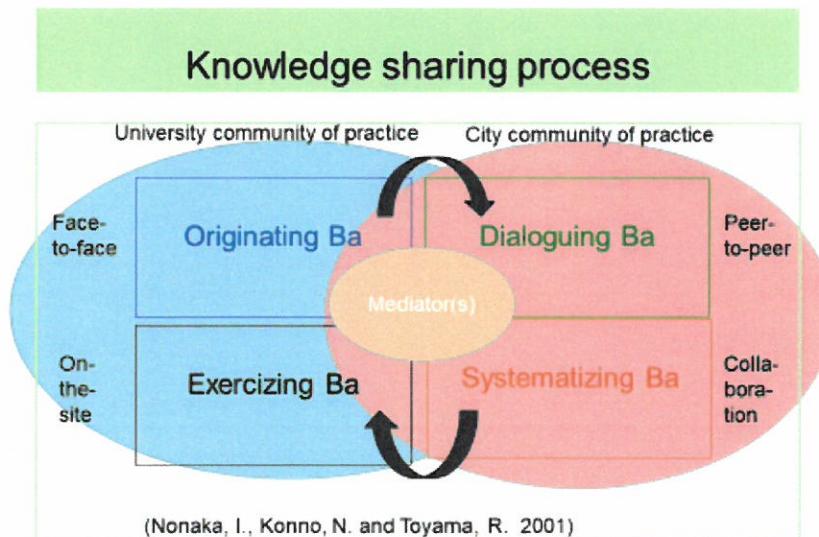
On the other hand, the communities of practice approach focuses on our everyday experiences on learning/knowledge creation and moves from there into concepts and theoretical understanding (Wenger 1998); the notion of community of practice is derived from a situated view of learning (Lave and Wenger 1991). This approach, hence, involves both cognitive processes and practice, both explicit and tacit knowledge, or reification and participation. Wenger (1998: 73) defines community of practice through mutual engagement, joint enterprise, and shared repertoire. There are communities of people who share some activity or practice and have similar values and norms and language (Lave and Wenger 1991, Wenger 1998).

However, it has been argued that there are important differences between the concepts of communities of practice and ba (see e.g. Nonaka et al. 2000). It has been pointed out that the members of the community of practice learn only knowledge that is embedded in the community but ba enables the creation of new knowledge. Yet, as we see knowledge co-creation and sharing as social and context dependent, we need to acknowledge that we always interpret new knowledge through our histories and existing assumptions (e.g. Lave and Wenger 1991, Wenger 1998).

The mediator concept has been discussed extensively (for categorization see e.g. Jyrämä and Äyväri 2007, see appendix). Mediating has been analyzed also through concepts such as innovation intermediaries (see e.g. Howells 2006, Bakici et al. 2013; Agogué et al. 2017) or as network managers (Nykänen and Jyrämä 2013), as well as from role theory perspective (e.g. Biddle, 1986; Biddle & Thomas, 1966; Broderick, 1999; Linton, 1936, all in Nyström et al. 2014), as are likewise present in the community of practice literature (Wenger 1998, 2000). These different approaches all share somewhat similar understanding on the mediator roles and tasks. Mediators (intermediators) are regarded as necessary actors to make interactions and matching of partners possible in innovation ecosystems (Katzy et al. 2013) or in-between communities (Jyrämä and Äyväri 2007, Wenger 1998), or within networks (Nykänen and Jyrämä 2013).

Yet, each approach does bring forth new tasks and perspectives to be taken into consideration. The notion of differing values, norms and languages is well acknowledged in all. However, their manifestation and ways to respond to the differences are multiple (Jyrämä and Äyväri 2015). For example, the Invisible hand emphasizes the role of structures and creation of networks within which the practices occur, whereas the Cultivator of care emphasizes the need for learning for all, including the mediator him/herself. Broker's category emphasizes the everyday activity of interaction building strongly on community of practice framework (Wenger 1998). Supporters of identity building try to capture the deeper levels of individuals' engagement (Jyrämä and Äyväri 2015) in knowledge creation; understanding learning as acquiring identity. We wish to point out that a mediator (organization, individual, and team) can act in several roles simultaneously or during different stages of joint activity, and that their actions determine their roles. (See e.g. Heikkinen et al. 2007). Finally, it is noteworthy to point out that the focus in this paper is to see the mediator as enabler of a knowledge sharing, nurturing and fostering rather than managing the process: building various spaces for knowledge sharing by understanding the specificities of different communities. The following Figure 1 visualizes the theoretical framework adopted as analyzing tool.

Figure 1: Theoretical framework – knowledge co-creation and sharing process



3. Research design

3.1 Context of the study: Innovative City -program

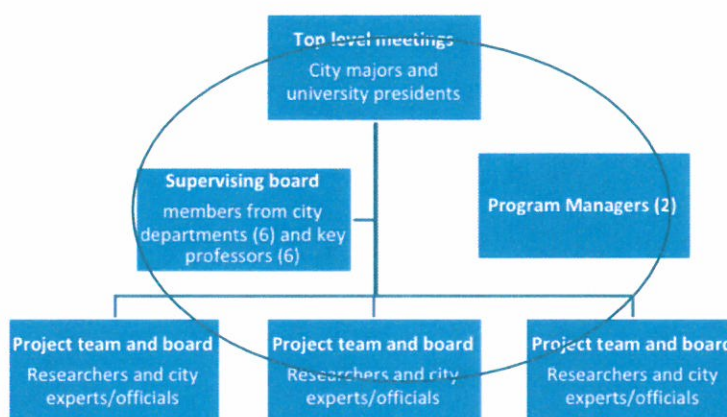
Innovative City® was a partnership programme between Aalto University and the City of Helsinki, aimed at generating innovations that support sustainable urban development through multi-disciplinary collaboration in research, art and development. The innovative City -program continued the previous collaborations of City of

Helsinki and Helsinki University of Technology, and Helsinki School of Economics. The current model under analysis builds on the collaboration from 2010 to 2015.

Collaboration under the programme was based on the scientific and artistic activities of Aalto University and the development needs of the City of Helsinki. Projects related to e.g. housing, traffic, construction, and ageing of city residents, among other topics, have been carried out under the programme. The financing of the Innovative City -program was divided equally between the City of Helsinki and Aalto University. The operational model developed under the Innovative City Partnership promoted collaboration between the city and the university in research, art and development projects. It was based on the coordinated work of specialists. Companies and other municipalities and universities were also often involved in the projects.

The programme provided support for the preparation and implementation of collaborative projects and for applying the results in practice. The projects needed to be linked to Aalto University's scientific or artistic work in which Helsinki forms the context, test environment and/or research platform. The mediated research projects have usually lasted between one and three years. The operation mode and key actors of the Innovative City program are visualized in figure 2

Figure 2: Structure of Innovative City program



The program outcomes were academic articles and other academic works, e.g. master thesis, development tools, innovations such as smart floors or virtual tools, bus routes and timetables, as well as new start-ups.

3.2 Data collection and analysis

The research approach of the study is qualitative. The study builds on one case selected because in all its particularity and ordinariness, the case itself is of interest (Stake, 2000). Different data collection methods that facilitate the understanding of the phenomena under study were used (Yin 2009, Flyvberg, 2006) and to gain a deeper understanding of the case (Patton, 2002). The data consist of action research approach by one of the innovative program managers (co-author), interviews, qualitative survey, and program reports and memos of meetings. The program managers (2) are assumed to be the main mediators. One of the program managers conducted the action research.

The action research traditionally occurs through cycles of action and reflection (e.g. Wadsworth 1998, Gronhaug et al. 1999). However, in this case, the actions were not consciously planned to create any specific outcome but to advance the main aim – city-university collaboration. Thus, no conscious interventions with the research in mind were made, which can be perceived as a lack in the research process. Moreover, in action research, especially in action research done in one's own organization, the difficulty of mixing different roles, researcher, project manager, organization's member, has aroused discussion among the researchers (e.g. Holian, 1999, Coghlan, 2001). In this case, the first interest lies within organizational aims, yet as simultaneously conducting research on mediating in several contexts, the roles and task of mediating were consciously looked at through the managerial activities and processes.

The interview data consist of eleven interviews of the programs supervising board members, each having long experience of the program conducted in autumn 2013 as part of the programs evaluation. Throughout the

program the meetings were documented, the memos and documents include yearly reports of the program and its projects, as well as memos of supervising board and memos of the meetings of the city majors and university presidents.

The method of analysis applied in the study is qualitative content analysis. The data analysis proceeded from the identification of various mediator roles at different stages of knowledge sharing. The analysis proceeded by first reflecting the actors from the community of practice roles, who were the participants in co-creation and sharing of knowledge and what types of roles they took. Then the activities were categorized through the concept of ba with conscious analysis of various mediator roles. Analyses of the qualitative research material focused in particular on how the participants in city- university collaboration projects perceived their roles, the questions raised and the boundaries that enable/hinder the collaboration and knowledge sharing. Each new piece of information was compared to the current state of understanding of a particular aspect, and sometimes previous conceptions were revised due to the new data: hence previous readings of data informed later analysis, while later assessment permitted the researchers to identify patterns in the data not identified in the initial analysis. In order to improve the quality of the study data triangulation (Patton 2002) was used when possible.

4. Results

When analyzing the Innovative City activities through the community of practice perspective, we can note that our assumption of two intersection communities of practice becomes blurred. In the analysis, we could detect several intersecting communities of practice. First, communities of practice based on shared professional background between both the researchers and city officials, for example in architecture. In several projects, the collaboration occurred in between people sharing similar backgrounds in education, which enabled smooth collaboration, in this case, often the project manager, rather than the program managers acted as mediator, translating the meanings from professional setting to broader university –city collaboration including also other professional fields. This support the original ideas within the theoretical setting on communities of practice (Lave and Wenger 1991).

Second, sometimes the mediating took place in the context of differing departments. For example, the city departments were very independent and had developed their unique ways of working, then the city official in charge of particular department acted as mediating in between not only university but in between different departments, introducing the ways of working and inner practices to other participants. Then the community of practice is defined by academic fields or city departments.

Third, the analysis also strengthens our assumption of the differing values and practices, as well as languages in between university and city, where mediating was needed and the mediators were the program managers. To summarize there were variety of different intersecting communities and the mediator roles were taken by other participants as well, both from city and university side in addition to program managers depending on the context.

The analysis points out that mediator roles and needs change according to the stages of the knowledge creation and sharing. Moreover, the stage of the project plays a major role (see also Jyrämä and Äyväri 2015, Nyström et al. 2014). Next, we shall elaborate the different stages in knowledge sharing using ba as a tool of analysis, followed by some reflection on mediating roles during different phases in the project. (see Figure 3)

Figure 3: Innovative City programme activities categorized by different ba (modified from Nonaka et al. 2001)

| | |
|--|---|
| <p><i>Originating ba (face-to-face)</i></p> <ul style="list-style-type: none"> • informal discussions, e.g. lunch or morning coffee meetings • informal discussions enabled during e.g. seminars | <p><i>Dialoguing ba (peer-to-peer)</i></p> <ul style="list-style-type: none"> • face-to-face discussions in context of regular meetings at different levels; • project boards, program’s project managers meetings • program board • meetings of the university president and mains |
| <p><i>Exercising ba (on-site)</i></p> <ul style="list-style-type: none"> • discussions and meetings to create and work on project applications • using advice received in face-to-face discussions when organizing one’s own project seminars and events | <p><i>Systematizing ba (collaboration)</i></p> <ul style="list-style-type: none"> • web pages • lectures and other information given in seminars • information letters, e-mails sent by the program managers • yearly reports and meeting memos |

Originating ba as the context for knowledge creation enables face-to-face interaction to share feelings, experiences and insights in an atmosphere of trust. In Innovative City program the informal knowledge sharing and co-creation occurred in-between city officials and program managers in joint morning coffees and lunches irregularly. However, in the context of the programme's events conscious effort was made to enable also informal face-to-face knowledge sharing. For example, a new event format was created to have originating ba – a market place for project ideas where new ideas were presented in more informal face-to-face setting allowing creation of trust and sharing feelings. Moreover, at each event new encounters were mediated through e.g. speed networking activity. In addition, the program managers were consciously introducing researchers with relevant research interests for matching city officials in order to enable potential new project openings. This activity can be seen as brokering – introducing the elements of one community to another.

Dialoguing ba is a space for peer-to-peer discussions. We categorized the various face-to-face meetings into the dialoguing ba. In Innovative City-program regular meetings were organized at different levels. The meetings with top level, city mayors and university president took place approximately once a year, were rather formal, and yet offered space for open dialogue. During these meetings there was little role for mediating due to their formal nature, however, the mediating took place in advance in creation of the agenda (providing also time for new openings) and preparation of the materials. For example, as the emphasis in respective side were more laid towards academic versus economic outcomes, both outcomes were given equal status in reports and meeting presentations. Hence, the mediating role was more of invisible hand or interpreter.

The main dialoguing ba for knowledge sharing and creation occurred at project level, the Innovative City program managers started to actively participate in each project's board meetings to facilitate the discussion and ensure knowledge sharing. In addition, the program managers facilitated the meetings to build up new collaboration projects. The roles of program managers were multifold: activist, translators and brokering. In addition, the program managers can be seen as cultural mediators, interpreting sometime academic practices and language to city community of practice language and vice versa. As an example, after a project planning meeting the researchers turned to the program manager and asked: *"Which parts of the discussions we had at the meeting relate to me and our joint project, can you please tell me what I should take into consideration from it."* Or during a meeting, as the city official used city's unofficial names for departments, the program manager asked them to explain these as the researcher clearly did not know what they meant. Moreover, a dialoguing ba was created in-between different projects under Innovative City program as it was acknowledged that the individual projects were rather independent and could benefit from synergies and learn from each other's. Regular meetings in between different project managers to share experiences and co-create knowledge were organized. These meeting can be seen as mixture of originating and dialoguing ba. The mediating role of program managers was first activist and further as the meetings became more established as supporters of identity building (belonging to Innovative City program) and cultivators of care.

The systematizing ba, where new explicit information is combined with existing information, is often the one taken as granted. The program provided a web page, collected and edited the reports as well as provided platform (wiki) for sharing memos etc. It relates to the mediators' insights of learning as transfer of information. Yet, in practice, the participants encountered difficulties in systematizing ba as well. The wiki was hardly used as seen difficult to enter, and e-mails became the most used form of systematizing ba. The role of mediator being mainly invisible hand.

Exercising ba supports internalization of new knowledge. There were rather few activities related to the exercising ba. For example, traditional seminars were organized in order to share knowledge having thus emphasis with explicit knowledge – and therefore their role was to enhance knowledge transfer from experts in research to experts in city management. However, in few cases program managers participated in helping actual project proposal writing processes that can be considered as exercising, i.e. helping to internalize the programme's rules and aims towards practice. Yet, in the context of actual projects, the exercising ba took form in e.g. usage of created new tools, models, and understanding. For example, the outcomes of Innovative City program projects were in some cases internalized to the extent that the outcomes were seen as created by the city or taken as granted. To highlight this, as case in point, is a seminar organized to present the collaboration where the newly appointed city official presented the tools and outcomes of joint projects as their own even though the researchers from respective collaborative projects were among the audience. The mediating role in exercising ba can be seen as brokers and cultivators of care.

It is noteworthy to point out that the role of program managers and the need for mediating does diminish in time. The project participants gradually learn to work together and find common language. It can be proposed, that they create a new sub community in-between the two communities of practice. When looking at the different projects and participants in Innovative city program, it was clear that same researchers and city officials that had had good experience of collaboration started new projects regularly and found new joint interests. The collaboration became win-to-win way of working for both sides. As an example, during one project where the participants had already previous experience of the collaboration the joint activities became more versatile including e.g. joint learning trip on site context (new forms of housing as context) rather than just meetings and each community having individual practices. This can be highlighted as claimed by city participants: *“this is how our development projects should work – learning from recent research but also be adaptive to new city needs and ideas along the project process”*. On the other hand, if looked at the larger setting, the emergence of new joint communities might hamper the entry for new interested parties for collaboration. Therefore, the need for mediators to be not only facilitators of interaction, but adopt the activist role as door openers becomes important.

5. Discussion and conclusions

In this study, we have analyzed the role of mediators in the context of SECI model, using the concept of ba. The analysis revealed that the role of mediators differed in different knowledge sharing and creation contexts, ba. The results point out that an important task of the mediators is to carefully and sensitively reflect and ponder their own and the participants' role in different knowledge co-creating and sharing contexts, ba. In addition, it is important to acknowledge the role of the entire ba. The role of mediators in enabling the creation of the contexts for knowledge creation and sharing, ba, is crucial. The creation of ba ought to be enabled at all levels of collaboration, in the case of Innovative City program the top level interaction was limited mainly to systematizing and dialoguing ba.

The analysis also pointed out that mediators ought to have access to the targeted communities, either by being members of it themselves or by having contacts within it that can grant the legitimacy to the participants of the project. For example, the role of professional communities of practice and the need of internal other mediators was important. The membership/identity of belonging to a particular community of practice was vital, and in order to enable collaboration these other insider mediators were needed; they provided access to the community-specific knowledge that is learnt by participating.

The use of the SECI model as tool of analysis to categorize the knowledge creation and sharing activities and the role of mediator induces a view of the activities as either with tacit or explicit knowledge. Yet, we question this view by pointing out that many of the activities could have belonged to several categories, including both tacit and explicit knowledge. On the other hand, the SECI model highlights the differing mediator roles needed to enhance the knowledge creation and sharing processes. Moreover, analysis of mediators as gate openers and interpreters, as wells the learning occurring within the actors participating in joint activity provides interesting insights for practitioners. It provides tools of analysis to plan and engage in collaborative activities and how to enable knowledge co-creation and sharing.

The main findings of our study are that our assumption of two different communities of practice, namely university and city communities proved to be over simplistic. The analysis pointed out that there were a multitude of overlapping and intersecting communities of practice. Moreover, the mediating took place by various actors depending on the context. Our results strongly suggest that there is a need for further study to take a closer look at the respective roles and joint mediating of these various mediators and the ways different communities of practice affect the collaboration.

The managerial contribution of the paper can be summarized to two key elements that need to be paid attention to. First, understanding the need to create different spaces for knowledge sharing, i.e. bas. Often the spaces for originating ba and exercising ba get neglected. Second, in multidisciplinary or any multi-stakeholder project or context: mediating by various actors is a pre-requisite for fruitful collaboration. Hence, resources should be explicitly allocated for mediating work.

The theoretical contribution builds on the novel approach on combining the knowledge sharing, especially discussions on SECI model with elaborations on mediator concept providing a novel understanding both for

SECI model usage as well as more insight to the mediator discussions. Moreover, the paper provides new arguments for criticism on narrow usage of the tacit vs explicit dichotomy.

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Appendix

Categorizations of mediators

| | CULTURAL INTERMEDIARY | BROKERS | TRANSLATORS | ACTIVISTS | AN INVISIBLE HAND | SUPPORTERS IN IDENTITY BUILDING | CULTIVATORS OF CARE |
|-------------------|---|--|--|--|---|--|--|
| Authors | Bourdieu, 1984 McCracken, 1986 du Gay et al., 1997 | Wenger, 1998, 2000; Brown and Duguid, 1998 | Brown and Duguid, 1998 | von Krogh et al. 1997, 2000 | Mittilä, 2006 | Jyrämä and Äyväri, 2007 | Kantola et al., 2010 |
| Relating concepts | | Boundary spanners Knowledge broker Inward and outward mediating | | Initiator (Mittilä, 2006) Catalyst as making something happen (Stähle et al., 2004) | Catalyst as a creator of structures (Stähle et al., 2004) | | |
| Main tasks | To create meaning. To mediate between differing fields or worlds. To mediate between national cultures. | To act in the area of overlapping communities of practice trying to build ties between the two communities. To introduce elements of the practices of one CoP into another CoP. | To frame the interests of one community in terms of another community's perspective. | To bring different people and groups together to create knowledge. To create spaces and occasions for joint actions. To make something happen. | To create structures and facilities for joint action. To create dynamic structures, e.g. networks. | To support the identity building process (from a newcomer or novice to a professional) | To foster learning understood as becoming especially in the context characterized by numerous sub-fields or "mini-worlds". |