Enhancing knowledge articulation in communities of practices: the role of the community leader

Isabell Schonhowd Haagensen
DNB Bank ASA,
Dronning Eufemias gate 30,
Oslo, N-0191, Norway
Email: i.s.haagensen@gmail.com

Eline Katrin Helland
Pasali Matgleder AS,
Torgallmenningen 8,
Bergen, N-5042, Norway
Email: elinekatrinhelland@gmail.com

Torstein Nesheim*
Centre for Applied Research at NHH,
Helleveien 30, Bergen, N-5045, Norway
Email: Torstein. Nesheim@snf.no
*Corresponding author

Abstract: In recent studies, it is argued that communities of practice (CoP) should be supported by management and backed by formal, organisational mechanisms. In this paper, tools that are initiated and used by the coordinators/leaders of CoP are studied. Based on a study of formal networks in a large organisation, four measures intended to enhance knowledge articulation are identified and analysed; the use of a core group as a structural tool, improvement of meetings, implementation of ICT-tools and engagement of network members who have their primary obligations elsewhere in the organisation. A number of implications for further research are drawn.

Keywords: knowledge articulation; knowledge sharing; communities of practice; formal networks.


Biographical notes: Isabell Schonhowd Haagensen is a Business Controller at DNB Bank ASA. She received her Master of Science in Economics and Business Administration with specialisation in Strategy and Management from Norwegian School of Economics (NHH).
1 Introduction

In contemporary organisations, the development, refining, sharing and application of knowledge are regarded as sources of innovation and competitive advantage (Nonaka, 1994; Grant, 1996; Connor and Prahalad, 1996; Davenport and Prusak, 2000; Dalkir, 2005). In order to stimulate learning processes in organisations, there is a focus on connecting employees across diverse units to enable knowledge articulation (Szulanski, 1996; Prencipe and Tell, 2001; Nesheim et al., 2011). Among the tools and mechanisms to achieve this end, a number of authors have investigated the structure and processes of communities of practice (CoP) (Wenger et al., 2002; Roberts, 2006; McDermott and Archibald, 2010; Bolisano and Scarso, 2014). Communities of practice are “groups of people who share a concern, a set of problems, a passion about a topic, and who deepen their knowledge and expertise in this area by interaction on an ongoing basis” (Wenger et al., 2002, p.4).

While early work on such communities emphasised self-organising, self-sustainment (Wenger et al., 2002) and their fundamental organic character (Harvey et al., 2013), more recent contributions have argued that they should be supported by management and backed by formal, organisational mechanisms (Scarso et al., 2009; Borzillo, 2009; McDermott and Archibald, 2010; Nesheim et al., 2011). Previous research has begun to study managerial tools employed to enhance the knowledge processes in these communities. Such mechanisms may be applied at different organisational levels and related to strategy, goals resources, technology, relations etc. (Probst and Borzillo, 2008; McDermott and Archibald, 2010; Nesheim et al., 2011). Here, we identify and analyse empirically tools that are initiated and used by the coordinators/leaders of CoP.

The organisational context of the study is a multi-dimensional and geographical distributed firm with HQ in Norway. The firm has implemented over 100 horizontal knowledge networks or CoPs, each related to a specific knowledge domain. Each network has members from a number of organisational units in the firm. The empirical analysis is based on interviews with 10 network coordinators and three other members of such communities.

2 Previous research

There are a number of perspectives and conceptual schemes that address the various knowledge and learning processes in organisations. Vital contributions include March’s (1991) differentiation between exploration and exploitation of knowledge, the
I.S. Haagensen et al.

internalisation-combination-externalisation-socialisation scheme that relates to the tacit/explicit knowledge dimension (Nonaka, 1994), the knowledge management cycle of knowledge capture/creation, knowledge sharing/dissemination and knowledge acquisition/application (Dalkir, 2005), as well as the three generic learning mechanisms; accumulation of experience, articulation of knowledge and knowledge codification (Zollo and Winter, 2002). As our focus here is knowledge sharing in CoP, the learning mechanism of articulation is especially relevant. The concept refers to knowledge that is “articulated through collective discussions, debriefing sessions and performance evaluation processes” (p.341). By engaging in such dialogue and discussion one may be able to learn through discussion and by confrontation (Prencipe and Tell, 2001).

Communities of practice are “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger et al., 2002, p.4). Such communities are constellations of people who have some work-related activity in common. They develop from the interaction that occurs in most work activities, but are separate from the day-to-day activities of the organisation (Hislop, 2005). Early studies of CoP emphasise their emergent, self-organising and informal character, and that such entities would emerge spontaneously when people want to share expertise and knowledge (Garavan et al., 2007; Bolisano and Scarso, 2014).

Later work has to a larger extent emphasised that the communities are a part of the organisation’s structure and that these communities could be designed and cultivated (McDermott and Archibald, 2010; Nesheim et al., 2011). There is, however, no consensus in the literature on this issue, and many contributions argue against a rationalised and formalised approach to CoP (for an overview, see Roberts, 2006 and Agrawal and Joshi, 2011).

In our opinion, a key task for research is to explore and analyse the mechanisms through which CoPs are influenced by intentional actions, whose aim is to promote learning through the articulation of knowledge. A number of authors have contributed to this endeavour. Wenger et al. (2002) describe formal structures to manage knowledge, and propose organisational roles devoted to the management of CoP activities; community leaders, champions and facilitators. The incumbents of such roles require some design, guidance and financial support to function effectively. Wenger (2004) argues that CoP are vital cornerstones of knowledge management and key elements in a knowledge strategy, and emphasises that successful communities typically combine bottom-up initiatives with top-down encouragement from managers.

McDermott and Archibald (2010) argue that the very informality of CoP may render it obsolete. If not supported by management, members will become less obligated to their peers and find it difficult to justify time for voluntary meetings with them. In order to strengthen CoP they should be

- set up strategically
- stimulated to increase their operational efficiency.

Table 1 sums up the specific mechanisms suggested by McDermott and Archibald (2010). The first set of factors is related to the strategic level and the involvement of top management. The second set of factors emphasises the resources and tools for community leaders.
Garavan et al. (2007) identify a number of specific strategies used by a community of practice manager to develop trust, facilitate collaboration, negotiate shared meaning, and manage power within the CoP. Based on a qualitative study, Probst and Borzillo (2008) identified 10 ‘commandments’ that lead to successful development and sharing of best practice. One success factor is that the CoP leader must have a driver and promoter role. The CoP leader should structure the work in the community into sub-topics and while coordinating the CoP as a whole. Such CoPs may also attract potential members if the CoP leader promotes the advantages of participation in the organisation as a whole.

Zboralski (2009) discusses the leadership challenges in CoP. While functional groups and teams have measurable objectives, CoPs tend to be oriented towards ‘generic’ learning and knowledge sharing in specific competence areas. Further, activities in CoPs tend to be informal and highly voluntary, relying on self-motivation and initiative of members. Thus, it often is the task of the community leader to motivate members to engage in CoP processes, to plan and organise community events, coach new members and support interactions between members. Zboralski (2009) argues and finds empirical support for a positive impact of the community leader’s actions on interaction quality and interaction frequency in a CoP. The study was based on responses from 222 members of 36 communities in a single firm.

In a similar study, Nesheim et al. (2011) argue that the community leader often fits the description of an integrating manager, whose power cuts across organisational units, but “never … extends to formal authority of the department personnel” (Mintzberg, 1979). In the absence of any formal authority, it is vital that the incumbents of this role create trust and influence exchange of ideas among members. In an empirical study of 2 517 members of 131 communities in a single firm, Nesheim et al. (2011) found that the quality of community leadership had a positive impact on knowledge application; i.e., the extent to which knowledge acquired in communities had been used in a beneficial manner in the employee’s unit.

Summing up, CoP:

- must be seen in the context of the formal and geographical structure of the organisation, as they often involve members from different organisational units and locations, and constitute a horizontal overlay of the hierarchical organisation
- often have in itself formal elements such as a community leader, a set of activities, resources and goals. When formalised, the CoP is a secondary structure of the organisation
- are influenced by intentional, authoritative actions, from top management and the community leaders themselves.
The purpose of this paper is to identify and analyse the actions of the community leaders, operating horizontally to influence the quality of learning through articulation among the members. Thus, the main focus is on aspect 3 above. However, the actions may target or influence aspect 2; the structure of the CoP as well.

3 The organisational context of the study

The study was conducted in March and April 2014 in a large global petroleum firm with headquarters in Norway. The firm was also the empirical context for a separate survey of disciplinary networks in February 2009 (Nesheim et al., 2011). The organisation has similar characteristics as in 2009; it is a complex, matrix-like organisation, with many national and international locations. The disciplines (and its CoPs) constitute a third structural dimension in the firm, after the line units and the projects.

There are over 100 disciplinary networks in the firm. Each of these is a horizontal, non-hierarchical knowledge community that covers a specialised knowledge domain, and have members with similar educational backgrounds and disciplinary identities. The purpose of the communities is to contribute to the creation, sharing, dissemination and application of knowledge within the given domain. The community is led by a discipline advisor, which is an established knowledge role in the firm. The community leader has no formal authority over the community members. The network tools include meetings with lectures and discussions, electronic communication, intranet usage and activities to stimulate relationship building among members.

An employee has her primary ‘home’ in a line unit, who bears the responsibility for HRM and personal management. The tasks are executed in the line unit or in a project managed by a project manager outside the line unit. In addition to the line attachment (and for some employees: the project), the employee participates in one or more disciplinary networks related to a specific area of competence. Membership is voluntary although each professional employee is expected to take part in at least one network. From the employee’s point of view, the community is a source of information, ideas and methods in their specialised area of work, and also an arena for building informal, professional relationships in the organisation. On the other hand, participation in a knowledge community also requires their time and may take the focus away from other tasks. The community leaders, for their part, are expected to provide leadership, but they are also confronted with numerous challenges, as they have neither hierarchical authority over members nor budgets for running disciplinary communities (Nesheim et al., 2011).

4 Data and methods

We conducted 10 interviews with disciplinary advisors, three interviews with members of networks and two interviews with employees in support roles, in March and April 2014. The purpose of the study was to provide insights into how community leaders could improve the networks and what strategies could be chosen to enable knowledge articulation. Therefore, we interviewed disciplinary advisors who were known as ‘good’ community leaders in the organisation, through their ability to activate the networks. The additional members interviewed were chosen due to their level of activity in and knowledge of their given network. The selection of respondents was done in close
cooperation with an HR-specialist who is responsible for coaching and training disciplinary advisors. Most of the respondents belong to the unit Technical Excellence in the firm. The networks in question cover several knowledge areas; various technical domains, project management, project control, as well as health, environment and security.

We conducted semi-structured interviews with each of the 15 respondents, targeting a number of themes. We posed open questions that enabled the interviewees to express their challenges, options and actions related to various aspect of the disciplinary network. Each interview was transcribed, coded and extracts were identified to develop emergent themes. The empirical analysis is organised around these themes.

5 Empirical analysis

In this study, the emphasis is on the disciplinary advisor (community leader), the actions taken and the mechanisms used to activate the network and enhance knowledge sharing and dissemination among members. From the interviews we identified four themes, related to the

- structure of the community
- meetings in the network
- technology
- engaging members in the network.

5.1 Community structure: establishing a core group

Even though there are over 100 specialised disciplinary networks in the firm, there may still be a high level of complexity inside each community. Especially regarding large networks, advisors report challenges in coordination across both geographical locations and subfields of the knowledge domain. We found several examples of core groups in the networks, that were related to coordination inside the network. A core group is a constellation of key members of the community, who have long experience and/or special competencies in the domain. By establishing such groups, the disciplinary advisor is able to delegate tasks to the members of the group, while also using them for advice. Core groups were organised along three dimensions; subfield, geography or community technology. Among the 10 advisors interviewed, most had a core group representing various subfields. One respondent described his core group:

“The core group covers different competence areas. The domain that I am responsible for is quite broad. It consists of four special topics, you might say. You should have extremely deep knowledge in each, at least it is an advantage if you have that (among the members). Each member of the core group covers their part. And I coordinate and knit together the broad picture.” (R 1)

Such core groups were used for different purposes; such as discussing vital themes in the specific domain of the network, developing the strategy for the community or working on plans for the operation of the network. Another example is the delegation of responsibility for a document that describes best practices regarding work processes:
I have picked five or six members and given them a task related to a document, where we receive many suggestions for improvement. The group will go through these suggestions and also reply to the employees. I also use the group as a resource when the document is to be revised.” (R 2)

One of the advisors had members who were working at different locations, spanning several continents. Due to existing travel restrictions in the firm, he was not able to visit as many locations as he wanted. Instead, he chose to establish a core group with representatives from most of the locations in question. The members of this group serve as linking-pins between the disciplinary advisor and the member locally. We also found examples of core groups, who were delegated responsibility for the key technological instrument, the ‘Community site’ (see also below).

The community leaders perceive that the establishment of core groups have positive consequences. They are relieved from part of their workload through delegation to the core group. Through discussions with the group, they are able to try out their own ideas as well as get input from others. As regards the core group representing various locations, the perception is that it contributes to more global networks, where members have a sense of belonging to an internal network.

5.2 Community arena: improving meetings

Network meetings are a vital arena in knowledge communities. In the firm’s guidelines, it is emphasised that meetings are an important part of the network. All our respondents express that meetings are instrumental for knowledge sharing to occur. In order to achieve this purpose, a key factor is the organisation of the meetings. Our respondents say that meetings should be planned well ahead; to enable high participation, create an interesting agenda and recruit contributors. To be able to obtain presentations etc. from people outside or inside the network, requests should be made well ahead. Especially, one has to take account of the members’ priorities and time restrictions, as network meetings come in addition to their primary tasks in the organisation.

Several community leaders delegate tasks related to meetings, such as agendas, to network members. One purpose is to create an agenda that is perceived to be useful and relevant for the members. When members contribute to meetings, it may serve as a recognition and create a commitment to the community. One respondent expressed:

“My focus is to delegate the arrangement of network meetings. I should delegate, even more, write down success stories, and allocate tasks to different members of the network. It creates ownership to the network.” (R 3)

As regards the content of meetings, many of the advisors use people from outside the organisation, including researchers, to contribute in meetings. Other respondents say that meetings should have presentations from members with the emphasis on knowledge sharing across organisational units; such as best practices, success stories as well as ‘failures’. We found that community leaders also used ‘quality assurance’, through commenting presentation drafts and giving advice to the contributors. In this manner, the threshold for getting ordinary network members to contribute to meetings, could be lowered.

There are two types of meetings, one-day gatherings and shorter, more focused meetings such as working lunches and workshops. One-day, physical (rather than virtual) gatherings are regarded as the most important arena in a community. Most networks have
one or two such meetings each year, that are open to all members. Many of our respondents express that face-to-face meetings are vital. Here, people that work at different locations should get to know each other and develop their own personal relations in the community. It is perceived that such relations tend to lower the threshold for seeking advice virtually. The quality of the exchange of information and ideas is also perceived to better when people are in the same room.

Many of the network meetings have over 100 attendants, and it is a challenge to enable two-way communication and discussions in such a context. One of the disciplinary advisors had tried to deal with this issue by splitting the meeting in two. In the first part, all members are together and attend various presentations. In the second part of the meeting, participants are allocated to different groups to discuss and share experiences on specific themes in the knowledge domain.

Short meetings usually focus on more specific themes than one-day meetings, and are often targeting subfields in the community domain. ‘Lunch and learn’ are one-hour video meetings that enable members across locations to participate. These arenas are usually about a specific theme and target a selection of community members. Discipline advisors say that in such meetings there are more discussion and more input from members, compared to whole-day meetings. A workshop is typically a one-two hour meeting (video or face-to-face) that includes specific group tasks. The disciplinary advisor selects the participants based on their knowledge of the task at hand.

Short meetings are easier to attend, as one may take part without travelling. They complement one-day meetings, because they provide an arena for discussions on specific themes and because they may be arranged more often.

5.3 Community technology: implementing ‘Community site’

In 2012, the firm implemented a social media tool named ‘Community site’ for the disciplinary networks. The purpose was to increase participation in and improve interaction among the members of the network. Several functionalities are included in the tool, such as a membership list, an information bank, an event calendar, a question and response function, news, a blog and a discussion board.

As often is the case for ICT-tools, there is variation in the actual use of the ‘Community site’. From an employee’s point of view, this is one of many potential electronic tools in the firm. One network member expressed a perception of lack of direction in the use of the tool:

“There is a lack of information regarding the use of ‘Community site’. I don’t quite see the usefulness of ‘Community site’, as we have several other (electronic) team sites, files and areas. It is not clearly defined what should be published at this site. The disciplinary advisor cannot sit and wish us to publish stuff at the ‘Community site’, as they don’t define what is to be published there and how it is meant to be used. There should be better cooperation with the line managers, the team-site group and the network.” (R 4)

The purpose of the tool is that members themselves should be responsible for obtaining information from the network, rather than just passively receiving emails. Thus, the intention is that members should be pro-active rather than reactive. Community leaders use several initiatives to enhance members’ use of the tool. Firstly, they inform about the tool. Some of the advisors have provided guidelines for its use. They target new employees because these are perceived to adopt new technological tools more swiftly
than experienced personnel. Advisors also inform about the site at network meetings. One respondent emphasised its usefulness for employees outside Norway:

“Some of the network meetings are related to Canada and the U.S. and we have presented how ‘Community site’ functions. We ask them to use ‘Community site’, because I believe they prefer networks that are independent of time zones.” (R 5).

Many of the advisors say they put pressure on the members to change the way they use the site. One has sent a number of emails to activate the members:

“In the beginning, you have to do a lot. You have to push things through. I believe that if you push long enough it will become a routine and it may happen more naturally.” (R 6)

Advisors also try to lead by example. They perceive that they cannot expect a high level of activity if they do not contribute regularly themselves. Many of the advisors use the site often, to ensure that members find new and ‘exciting’ information there. If there are few contributions they will lose interest, while regular activity is perceived to stimulate contributions from network members. The quality of the content is also important: “To search the ‘Community site’ should be different from using Google” (R 7), as one of the respondents put it.

There are a question and response function in ‘Community site’, where every query is visible to all members of the network. This is regarded as a better tool than a closed two-way dialogue between the member (question) and advisor (answer), where the information is not available to others in the network. The challenge with the new tool is that members may be reluctant to ask questions, fearing their questions to be ‘stupid’ or that “they should have known this in the first place”. Many advisors say that building a ‘culture of sharing’ is important. They challenge members to ask questions, emphasise that a particular query probably is relevant for others, and that no questions are ‘stupid’. They also try to answer queries in a swift manner and request other competent members to answer specific questions.

5.4 Community members: engaging individuals

The disciplinary advisors have no formal authority over the network members. Therefore, one of the main challenges for the advisor is to motivate and activate employees, who have their primary commitments elsewhere in the organisation; in their line unit or in a project. From the interviews, we identified several ways in which community leaders tried to engage the members. First, they emphasise the building of direct, personal relations. When abroad, they tend to contact potential members and invite them to network meetings. Compared to sending emails, such initiatives signal that the employee is ‘seen’ and acknowledged by the advisor. If one has met an employee in person, the threshold for making contact through telephone and email later is perceived to be lower. Advisors also actively try to ‘sell’ the disciplinary network, by emphasising the usefulness for the person in question.

Secondly, advisors invite members to contribute to meetings and other arenas. They try to find tasks and activities where the member has a special interest or a special competence. According to the advisors, members perceive such inquiries in a positive manner. They find it motivating to be visible and share information and experiences with other members of the network. As one of the advisors put it:
“I believe it is important to tell people that “you are now working on something that is very interesting for many”, and quite simply to encourage them to share with others. Most people respond to this in a positive manner and are happy to share information.” (R 8).

Thirdly, recognition to contributors is considered to be vital. Advisors strive to make contributions better known and contributors more visible in the network. Recognition is given directly to the person in question or in front of the network members in meetings. One advisor had awarded a special price ‘network member of the year” to a person who had contributed considerably to knowledge sharing. When members receive recognition, they are perceived to become more satisfied with their contribution and more motivated:

“I try to be better in giving recognition to members when they contribute…They get more happy and tend to ‘grow’ through it… and I think: It required so little of me, why don’t I do it more often.” (R 9)

We also found that advisors facilitate career opportunities for members. They give feedback to the line manager of the network member, if the latter has contributed significantly to the network. Such responses are vital because it is the line manager who is the resource manager of the employees, and evaluates her performance. A member who contributes to the network is also made visible to other units in the firm. The network typically comprises several organisational units and locations, and through ‘word of mouth’ information about these members as potential candidates for job openings elsewhere becomes available. As expressed by one of the advisors:

“I believe that those who contribute actively to the network will get more opportunities. The reason is quite simply that they are clever people. They do a lot of good things and are visible. If you are visible on the network, they will also to a certain extent be seen by other business units. It is more difficult to know what those who never contribute to the network really knows.” (R 10)

6 Discussion

In the empirical analysis, we have shown how community leaders influence knowledge sharing and articulation through four measures. A common factor for each of these options, is that they are especially relevant in the context of large networks. Knowledge communities in the company vary in size, and the largest has several hundred members. In large networks, the challenges of making meetings work differ from smaller networks, where members to a higher extent tend to know each other. In the former type of networks, one tends to have direct contact with only a small percentage of the other members, and therefore the use of ‘Community site’ is of particular importance. The use of core group is also particularly relevant in complex and geographically dispersed communities, and these variables correlate with network size. Finally, while community leaders tend to know most members in small networks, they have to be active and build personal relations to activate participants in larger networks. Thus, while the four measures probably are relevant in all networks, we hypothesise that both the potential effect of and the challenges of using these mechanisms are greater in large as opposed to small networks.

The findings here are related to other contributions to the understanding of knowledge communities. As regards core groups of CoPs, previous work by Wenger et al. (2002) and Borzilko et al. (2011) have identified core groups in the context of different levels of
member participation. Probst and Borzillo (2008) identified lack of a core group as one of five reasons for the failure of CoPs. In this paper, we consider the establishment of core groups as a structural tool in CoP, initiated and implemented by the community leader. We have identified three bases for core groups; subfields in the knowledge domain, location and community technology. In relation to the community leader, a core group has two different functions; they allow for delegation of tasks and provide a forum for discussion and advice.

Here, (face-to-face) meetings have been described both as a vital arena in a network and a target for community leaders’ attention. Previous research has addressed these issues in an indirect manner, for example, in analysing content and processes of networks (that are ‘set’ in meetings) without taking the actual arena into consideration (Harvey et al., 2013; Alternatively, as in Garavan et al. (2007), network meetings provide the context of the study, but is not analysed as such. Here, we have shown how this arena may be improved through better organisation, delegation of tasks and emphasising the content of meetings.

McDermott and Archibald (2010) say that IT tools make global cooperation possible, and that “simplicity, ease of use and familiarity are far more important than functional sophistication” (p.6). Technical difficulties and challenges of understanding the tool were not identified as vital issues among our respondents. Rather, in order to achieve use and global reach of the network the main challenge was to enhance a pro-active rather than a reactive approach to the IT-tool in question. Advisors enhance this approach through leading by example and putting pressure on members to contribute.

In addition to the measures related to the structural and technical aspects of the network, community leaders emphasised the challenge of engaging members into contributions to the network. We found that the community leaders build relations, invite members to contribute and try to make contributions more visible in the organisations. The measures to engage participation are related to previous research on employees’ internal motivation; i.e., “the inherent tendency to seek out novelty and challenge, to extend and exercise one’s capabilities, to explore and to learn” (Ryan and Deci, 2000: 70). Such motivation is advantageous for the willingness to learn and in situations when knowledge sharing involves a voluntary dimension (Osterloh and Frey, 2000). Previous studies have found a positive relationship between internal motivation and knowledge sharing (Reinholt et al., 2011; Foss et al., 2009; Nesheim et al., 2011). In this line of enquiry, our findings in a formal network context may be interpreted in the following manner: There is probably a positive general impact of internal motivation on knowledge articulation in the networks studied here, but the effect of this type of motivation will be influenced by the measures taken to engage members into active participation in knowledge sharing. Thus, there is a reason to believe that there is an interaction effect between the two variables, where the impact of such measures are higher if they target members with a high degree of internal motivation, compared to members with lower internal motivation.

7 Conclusion

Here, we have analysed the measures taken by leaders of internal, horizontal knowledge communities to enhance knowledge sharing. Our findings are relevant in the context of the knowledge process of articulation, and for the study of formal, rather than informal
and emergent, CoP. The study targets actions that the key person in such communities – the community leader – may take. Our findings reveal that measures include both the structure and content of the network as well as engaging individuals to act. The four measures analysed here, partially overlaps with McDermott and Archbald’s (2010) conceptual scheme – the common elements are meetings and ICT-tools – and add core groups (a structural tool) and activating network members to the list of tools.

This study may inform future research in a number of ways. First, one could study the measures used by leaders of other knowledge communities. Do they use similar or different measures compared to the ones identified here, and what are the rationale and perceived effects of each of these? Secondly, one could study outcomes of and effectiveness of formal community networks, emphasising the effect of community management. To what extent do community leaders have an impact on network performance, and what are the functions of specific actions and measures taken by the community leader? Thirdly, we have suggested that the four measures are related to the size of the network. To what extent are the use of and effectiveness of these options related to network size? Finally, future research could analyse the interaction effects between internal motivation and actions of community leaders and how such actions affect knowledge sharing activities in CoPs.

References


**Note**

1In this part of the paper, the terms (disciplinary) advisor/community leader and disciplinary network/community is used interchangeably.