Embedded knowledge management: towards improved managerial relevance

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Abstract

Despite the large volume of research and managerial literature on knowledge management many practitioners seem to find it difficult to appreciate its added value for their managerial work. This paper aims to understand and elaborate the added value that knowledge management as a managerial approach can bring to the management of knowledge-intensive organizations. This study explores empirically the actual management practices of a knowledge-intensive organization and examines how knowledge-related phenomena are managed as embedded aspects of management. This paper makes a contribution to prior discussions concerning the relevance of knowledge management and the role of knowledge management as an embedded management practice. The findings of this study should be useful in explaining practitioners the nature, relevance and value of knowledge management.

Keywords – Embedded knowledge management, Knowledge-intensive organization, Management, Managerial practice, Relevance.

Introduction

The performance of knowledge-intensive organizations is determined by their ability to transform knowledge (or more widely, knowledge assets) into value for their customers (Alvesson, 1993; Grant, 1996; Lönnqvist & Laihonen, 2016; Schiuma et al., 2007). Knowledge management is a discipline focused on the managerial issues dealing with knowledge. According to Gao et al. (2008, p. 11), the objective of knowledge management is "the effective and efficient management of existing organizational knowledge and the mobilization of personal knowledge for achieving organizational goals". Thus, knowledge management seems ideally suited for meeting the challenges of knowledge-intensive organizations (Evanschlitzky et al., 2007). However, despite the large volume of research and managerial literature on knowledge management managers seem to find it difficult to appreciate its added value for their managerial work (Bailey & Clarke, 2000).

Even though the knowledge management discipline has been evolving roughly twenty years already (or more, depending on how one defines it), the extent and ways in which knowledge management is actually applied by practitioners (i.e., managers) is somewhat unclear. Some authors have raised up the question concerning the managerial relevance of knowledge management (Booker et al., 2008; Serenko & Bontis, 2011). This might be caused by the fact that the field of knowledge management is too dispersed for the practitioners to identify the frameworks and tools most useful for their particular purpose (Maier & Remus, 2003). On the other hand, the majority of literature on knowledge management seems to deal with somewhat technical tasks related to knowledge, such as knowledge sharing within an organization or the measurement of knowledge-related phenomena (Heisig, 2009), while the managers of knowledge-intensive organizations actually struggle with more general management type challenges such as personnel management issues, running operative processes, customer service and budget management. This contradiction may raise the question of "what's in it for me" (Bailey & Clarke, 2001) – i.e., what is the personal relevance of knowledge management for a manager? Yet another potential explanation relates to the lack of evidence regarding the impact of knowledge management practices and interventions on the organizational performance (Inkinen, 2016). These issues bring up the question on the extent that knowledge management – despite its promise – is making a contribution to the key management tasks of knowledge-intensive organizations.

The aim of this paper is to better understand the added value that knowledge management as an approach can bring to the management of knowledge-intensive organizations. This paper explores empirically the actual management practices of a knowledge-intensive organization and examines how knowledge-related phenomena are managed as integrated aspects of management processes. By doing so, this paper makes a

contribution to the discussion on the role of knowledge management as an embedded management practice.

The rest of the paper is organized as follows. First, a literature-based conceptual part of the study briefly summarizes what is known about the use of knowledge management in knowledge-intensive organizations and then advances the discussion on potential relevance problems and the means to address them. Second, an action-oriented case study portraying a university unit is reported. Finally, conclusions are drawn based on the empirical findings.

Literature review

The management of knowledge-intensive organizations includes specific characteristics due to their nature (Käpylä et al., 2011; Miles, 2005; Millar et al., 2016; Starbuck, 1992). For example, the work is conducted by autonomous experts and the work processes are typically somewhat unstructured (Alvesson, 1993; Robertson & O'Malley Hammersley, 2000). Moreover, key resources and the output produced are to a large extent intangible in nature (Laihonen & Lönnqvist, 2010).

Many studies agree on the basic ideas of the significance of knowledge as a value driver for knowledge-intensive organizations and of the potential of knowledge management in reaching business performance improvements (e.g., Evanschlitzky et al., 2007; Schiuma, 2012). However, as described in Introduction, there are doubts about the actual practical contribution of knowledge management. According to Bailey and Clarke (2000, p. 235), "many managers have yet to grasp the clear personal relevance, utility and organizational significance of KM" and some may think that "isn't KM what good managers should be doing anyway?"

One potential hurdle for a more wide spread use of knowledge management is the lack of evidence on the organizational impacts of knowledge management. For example, Andreeva and Kianto (2012) highlight the shortage of empirical studies demonstrating the connection between knowledge management and organizational performance. However, nowadays there are more and more studies showing evidence about the impacts of knowledge management on organizational performance (e.g., Andreeva & Kianto, 2012; Darroch, 2005; Inkinen, 2016; Massingham, 2014; Palacios Marqués & Garrigós Simón, 2006). Therefore, other explanations are needed in order to fully understand why knowledge management has not become as popular as could have been expected.

Maier and Remus (2003) suggest that knowledge management is such as diverse and incoherent field (i.e., a vast amount of models, frameworks and tools exist) that it may be difficult to understand which would be the most useful approach. This is not only related to the big variety in managerial tools but also to the

variety in perceptions and definitions of what knowledge management actually is. There are more narrow and technical views of knowledge management (i.e., those which connects knowledge management to certain specific knowledge processes and tools) as well as wider, more comprehensive views. An example of a wider interpretation is by Gao et al. (2008, pp. 12-13): "knowledge management in essence means to manage organizational human activity systems" … in other words … "knowledge management in a business organization means managing the activities of knowledge workers, which is achieved through facilitating, motivating, leading and supporting knowledge workers and providing or nurturing a suitable working environment".

The definition by Gao et al. (2008) above considers knowledge management an integrated part of managing (knowledge-intensive) organisations. It suggests that knowledge management is not something extra (a new process or a set of tools) management should take into use but instead a new way of thinking – a new perspective to management. According to Bailey and Clarke (2001), this shift in thinking (i.e., from a specialist function to an integrated view) might be a way to increase the relevance of knowledge management. They claim that the ultimate breakthrough in knowledge management will come when there is a realisation that managing knowledge in the twenty-first century is what managing organisations and their change actually is. They believe knowledge management "is most usefully thought about as a perspective on management, not a set of specific activities or techniques for managers to acquire or tack on to their existing activities and roles" (Bailey & Clarke, 2001, p. 67).

It seems that an integrated approach to knowledge management would be useful for increasing the managerial relevance of the issue. For example, Ambos and Schlegelmilch (2009) suggest that knowledge management is only valuable to organizations if it is embedded in and aligned with their strategy and not seen as an isolated or self-sufficient function. They also state that "the promise of knowledge management can only be realized if people are open to changing business processes and adopt new ways of thinking" (p. 505). They claim that the benefits are realized through new ways of doing business and by improving current processes. Strohmaier and Tochtermann (2005) suggest that the integration of knowledge management into an organization's business processes is a pressing challenge for the advancement of the knowledge management discipline.

In previous research, the integration of knowledge management into other managerial processes has been explored from many perspectives. For example, previous studies have proposed that knowledge management should be integrated with innovation management (Goh, 2005), customer relationship management (Gebert et al., 2003), regional development (Carrillo et al., 2014), the management of business growth (Laihonen et al., 2015), process management (Maier & Remus, 2003; Stary, 2014;

Strohmaier & Tochtermann, 2005), products and processes (Chang & Ahn, 2005) and the phases of consulting project execution (Ambos & Schlegelmilch, 2009).

Embedding knowledge management in general management practices can be seen quite natural if we consider the parentage (i.e., the origins) of knowledge management as a discipline. It has not developed out of nothing but instead can be traced back to many other disciplines such as economics, sociology and data management (Gao et al., 2008; Lambe, 2011). Moreover, there are obvious areas of overlapping with many management fields such as human resource management and strategic management. Thus, knowledge management and other management disciplines have in any case partly similar purposes and tasks.

It should be noted that some authors refer to 'embedding knowledge management' in the meaning that they want to better connect different types of knowledge management philosophies and techniques (e.g., information technology focused vs. human resource focused) in order to create a more coherent discipline (Argote et al., 2003; Maier & Remus, 2003). In this paper, 'integration' and 'embedding' refer to understanding knowledge management as a perspective to and an integral part of management.

While coming up with the idea of embedded knowledge management seems promising, there is still a long way to finding an answer to the value-added question: how does knowledge management make managers more effective and efficient in what they do? What should knowledge management offer to the managers in order to make it seem more valuable? Bailey and Clarke (2001) state that managers need to see how knowledge management can enhance their personal effectiveness in achieving what they want to do. Otherwise, they are unlikely to regard knowledge management as valuable.

Based on previous literature it remains unclear how one should deal with the issues of embedded knowledge management in order to come up with practices that are considered managerially relevant and valuable. Bailey and Clarke have published two articles in 2000 and 2001, which provide some guidance towards this direction. Their first paper starts by defining knowledge management from the perspective of managerial utility. First, they define knowledge simply as 'usable ideas'. In their definition, 'usable' has three aspects: usable ideas are current (i.e., they relate to important and topical organizational issues), relevant (i.e., the ideas relate to personal goals and interests) and actionable (i.e., they are practical within an individual's current capacity). Second, knowledge management is defined as the extent that managers can generate, communicate and exploit knowledge (i.e., usable ideas) for personal and organizational benefit. The assumption is that defining knowledge management in this manner makes it easier for the managers to grasp what it has to offer to them. The authors continue with the same topic in their 2001 article, which focuses on the managers' personal relevance perspective. As a result of their study, Bailey

and Clarke developed a framework that can be used to interpret knowledge management activities from the perspective of managerial tasks (Table 1).

Table 1 Managerial knowledge portfolio (based on Bailey & Clarke, 2001, pp. 59)

	Existing	Potential
Strategy	**Strategic fit: where and how are we competitive at the moment?** Which managerial practices, processes or techniques help in answering question related to this theme?	**Strategic potential: where and how can we be competitive in the future?** Which managerial practices, processes or techniques help in answering question related to this theme?
Operational processes	**Performance management: how well are we delivering to our strategic objectives?** Which managerial practices, processes or techniques help in answering question related to this theme?	**Performance improvement: how could we enhance our operational performance?** Which managerial practices, processes or techniques help in answering question related to this theme?

Table 1 portrays a simplistic view of key managerial tasks both at operative and strategic levels. They are examined in two time frames: in the current reality and in the potential future. The idea of the framework is to look at the different managerial tasks and the related key questions that managers must be able to answer, and then to identify the (knowledge) management practices and tools that are helpful in answering the questions. This links knowledge management practices and processes to core management tasks.

The framework by Bailey and Clarke looks promising as an analytical framework, but does it serve its purpose in practice? Can it help us better understand the nature of embedded knowledge management? Could it be used as an analytical tool for identifying gaps in managerial knowledge (i.e., the answers and answering tools related to the key questions)? If so, it would provide a useful basis for developing knowledge management practices and it could also help illustrate the relevance of such activities. However, we are currently lacking answers to these questions. Therefore, they will next be explored further in the empirical part of this study.

Case study: empirical research setting

This paper explores the issue of embedded knowledge management using a case study approach. Case study seems useful for the purpose because it makes it possible to obtain an in-depth understanding of managerial needs in a given context (Eisenhardt, 1989). This issue is particularly important in this study as the aim is to understanding *the added value and personal relevance* of knowledge management for a manager.

The case study examines the management practices of a university unit, the Faculty of Management at University of Tampere, Finland. It was selected for two reasons. First, academic work represents a typical knowledge-intensive working environment in which the knowledge workers' know-how is a key resource and knowledge (i.e., new scientific knowledge, learning outcomes) is also the main outcome of activities. Thus, it serves well as a case representing the management challenges of a knowledge-intensive organization (even though academic organizations naturally have their own peculiarities also). Second, the author has been in a full-time leadership and management position (i.e., dean) of a university unit of more than 200 employees for the past three years, which provides a unique access to issues dealing with management challenges and personal relevance of managerial tools. This thorough personal knowledge and understanding can be utilized for reflecting on the role of knowledge management in relation to the unit's and university's management processes.

In previous research Cranfield and Taylor (2008) have examined the role of knowledge management in a university context. Their study supports the paper at hand as one of the key purposes of their study was to better understand why knowledge management has not been widely accepted as a managerial approach in universities. Their findings show that the academic staff actually felt that their work involves managing knowledge and thus they are involved at some level in knowledge management. Moreover, by virtue of their missions, universities create and share information and knowledge as their core activity. Their study concluded by identifying several themes for further research. One of them was the following: as universities consider themselves to already be sharing, creating and disseminating knowledge, what are the areas that can be improved with knowledge management? This resonates well with the study at hand as the key objective here is to understand better the value added of knowledge management. Thus, the forthcoming empirical examination in tightly connected to the research needs identified in previous literature.

Utilizing the author's own managerial experience as research data can be regarded as a somewhat unorthodox approach. While the practical experience and understanding of the experienced managerial reality is profound there is a risk of producing highly subjective interpretations. However, as we are discussing about questions related to manager's personal relevance, subjectivity is in any case an essential

aspect of the phenomenon. Nevertheless, in order to get analytical distance to the practical management work, the case description is produced by utilizing a conceptual framework selected on the basis of the literature review. The framework by Bailey and Clarke (2001) (see Table 1) is used as a means of structuring the case findings. In this way, the framework is also put to the test by examining its usefulness as an analytical tool. In order to increase objectivity and to verify the accuracy of the case description the Head of Administration and the Head of Study Affairs – people who know very well the management practices at the Faculty of management – have reviewed the manuscript and confirmed that the description corresponds to their views. The case study will focus on examples of typical and important management issues because a comprehensive analysis of all issues would be too extensive for a single study.

Findings

Overview to the knowledge-related management issues in the case organization

At any given time there is a big number and variety of issues on the manager's agenda. At the Faculty of Management, many of them relate to personnel: for example, how can we attract the most talented people to our organization, how to ensure that the working conditions serve the needs of the current staff members as well as possible and how to communicate successfully about important organizational issues such as objectives in order to guide activities towards a joint goal? Some issues relate to operative processes: are our education processes running as they should be, are we managing to keep within the budget limits and are we successful in the competition for research grants? A university unit has a lot of stakeholders and a part of managerial attention has to focus on issues related to them: for example, are our students satisfied with the quality and the flexibility of our pedagogic offerings, do our research partners value our contribution and are we making an impact in the eyes of our partners outside academia.

The key activities of a university unit are based on transforming the knowledge and skills of employees into valuable outcomes for various stakeholders, i.e. academic research community, students and other stakeholders such as companies and public organizations. Knowledge-based resources are transformed through processes and services such as research projects, degree programmes and pragmatic development projects. Structural issues such as formal organization, IT systems, process guidelines and quality principles are important aspects of the service process. Moreover, the image of the university as a centre of high-level expertise and as an objective, critical and ethical agent are important assets that enhance the perceived value provided by its services.

Despite the central role of knowledge as a key resource and a driver of performance, no explicit 'knowledge management' practices have been implemented at the Faculty of Management. However, one cloud claim

that in most of the managerial processes the knowledge perspective is somehow integrated as an essential aspect of the whole activity. For example, various events are organized in order to let people share their knowledge on topical issues, such as preparing a funding proposals. Cross-disciplinary collaboration is strongly encouraged in order to make novel discoveries. In the Faculty organization, there are formal groups with responsibility over planning and controlling the operations of the degree programmes (i.e., the knowledge-based production) – as mentioned, degree programmes and other education products are designed by packaging the state-of-the-art knowledge on the topic into a set of courses corresponding relevant learning objectives and job market needs. Furthermore, researcher training and research group activities involve learning tacit skills (e.g., how to write a high quality research proposal) from seniors and other group members. Finally, all staff members are constantly being evaluated by peer researchers in the context of applying for research grants and when they apply for posts. Thus, it can be claimed that the Faculty of Management is a "text book example" of a knowledge-intensive organization engaged in embedded knowledge management practices: there are numerous processes and practices aimed at sharing, utilizing and evaluating knowledge, which take place as integrated parts of the routines and management practices of the organization.

Knowledge needs, related managerial tools and gaps in current practices

The managerial knowledge portfolio (Table 1) is next used as an analytical framework for taking a more detailed view of some key knowledge-related management challenges. First, the 'strategic fit' perspective: where and how are we competitive at the moment?

In the case of Faculty of Management, our competitive position is fairly well-known through various evaluation processes done both at national and international levels. In Finland, the Ministry of Education and Culture is currently giving pressure to universities to specialize and develop unique profiles. In order to serve this purpose various evaluation and benchmarking exercises have been conducted. Moreover, international discipline-based university rankings (e.g., QS World University Rankings) provide additional information about the status of different fields. In addition, the fact that we receive a high number applications from prospective students and that our graduates are employed very well is a further evidence for fulfilling a relevant "market" position. As a result, we know fairly precisely the answer to the 'strategic fit' question.

Second, the 'performance management' perspective: how well are we delivering to our strategic objectives? In Finland, the Ministry of Education and Culture is providing the majority of funding for the universities. This funding is based on the performance of the universities and, consequently, the results of key performance variables (e.g., the number of degrees produced and the number and quality of journal

articles produced) are actively monitored. This information is not only relevant in terms of serving the needs of the Ministry but it also shows how we perform regarding some key aspects of teaching and research. Besides the Ministry, we get funding from various research funding organizations and also from the public and private sector organizations. The extent that we are successful in the competitive procedures related to these external funding opportunities is yet another way to see how we are performing. Moreover, some additional information is collected, for example, regarding staff wellbeing in order to get a comprehensive view of our performance. Thus, it seems that the 'performance management' questions can also be answered fairly well.

Third, the 'strategic potential' perspective: where and how are we competitive in the future? While the two previous perspectives focused on current issues and utilized information about actual results, this one requires predictions about the future. This aspect is significantly more challenging than the two previous ones. In order to be able to identify upcoming strategic opportunities, we should somehow foresee the major changes that will affect our operating environment. Big changes and not knowing what is going to happen in the future cause uncertainty and make it difficult to make informed decisions. At the moment, there are some practices in use at the Faculty of Management which support this task. For example, we arrange a strategy seminar with the Faculty Board a few times a year outside the university premises in which we focus on major strategic themes affecting our operations in the future. This facilitates a thorough discussion and an exchange of views in order to explore various scenarios and potential actions to take. Another aspect of exploring the future strategic potential is to make experiments. An example of such experiments is to develop new education products for new markets (e.g., in terms of education export) and to see whether these initiatives will succeed. However, besides such experimentation we currently lack a thorough understanding of the potential of new markets and products. To summarize, some activities exist that support answering the 'strategic potential' questions but it nevertheless remains somewhat problematic.

Fourth, the 'performance improvement' perspective: how could we enhance our operational performance? As we move back from the strategic level to the operative level this question seems much easier. The same tools and processes discussed in connection to 'performance management' provide a good basis for identifying not only our current performance but also the areas where our performance is suboptimal. After pinpointing the areas of improvement, it is usually fairly easy to come up with development plans to improve the situation (e.g., by benchmarking other organizations for good solutions). Then, through trial and error new practices and process can be taken into use. At the Faculty of Management, there is an annual planning cycle according to which we evaluate performance and identify a selected set of development targets for the following year. Similar procedure takes place at a more operative and detailed

level in the degree programmes. Therefore, the 'performance improvement' questions can be answered fairly well at the moment.

Analysis and discussion

The empirical findings demonstrate, as expected, that the management of a knowledge-intensive organization deals to a large extent with issues related to knowledge. The findings also show that knowledge management is tightly embedded into the normal managerial practices. Thus, the findings support the earlier views by Ambos and Schlegelmilch (2009), Bailey and Clarke (2001) and Gao et al. (2008) suggesting that there does not have to be any distinction between 'knowledge management' and 'management', especially in the knowledge-intensive context. Moreover, the value added of embedded knowledge management is ultimately achieved as a result of managerial actions taken. Thus, managers (and other actors in the organization) should change their thinking and behavior based on the insights obtained through being engaged in knowledge management practices. The organizational value is created as a result of new ways of doing things as suggested by Ambos and Schlegelmilch (2009).

Bailey and Clarke (2001) suggested that knowledge management becomes valuable for managers only when it has some personal relevance to them, that is, when knowledge management improves their personal efficiency and effectiveness. Reflecting on the findings, current (embedded) knowledge management practices do seem valuable as they help answer some of the key management questions at operative and strategic levels. Moreover, there seems to be room for additional future-oriented knowledge management practices that might help cope with major changes and the related uncertainty. These observations supplement the prior understanding by Cranfield and Taylor (2008) related to their search for the value added of knowledge management in university context.

The conceptual framework by Bailey and Clarke (2001) utilized as an analytical tool proved applicable and useful. It provided a systematic and structured basis for examining the key management tasks and the related knowledge management practices. It also helped identify an area of management (strategic potential), which was not optimally covered by the existing practices.

Conclusions

The aim of this study was to better understand the added value that knowledge management as a managerial approach can bring to the management of knowledge-intensive organizations. Based on the finding of this study, the question of added value can be approached at least from the following

perspectives. First, the question of value added can be regarded as somewhat irrelevant if knowledge management is considered an essential, embedded part of management in general, that is, a perspective to management. In this sense, knowledge management is not something extra – added on top of normal activities – and thus we do not even have to worry about its added value. Second, the management of knowledge-related phenomena is essential in knowledge-intensive organizations and thus (embedded) knowledge management is valuable: it is not a realistic option to stop managing knowledge-related phenomena. Third, it seems that it is possible to find case-specific opportunities in which certain knowledge management activities can add extra value to existing management practices. In these situations new knowledge management activities could be implemented for handling a key managerial task which otherwise could not be satisfactorily handled with the existing managerial practices (i.e., to fill a gap in managerial knowledge).

This paper makes the following contributions to the existing literature. First, it provides enhanced understanding to the prior discussions on a) the relevance of knowledge management for the managers of knowledge-intensive organizations and b) on the nature of embedded knowledge management. In particular, it demonstrates what the embedded knowledge management practices are like in practice – in this case in the general management of a university unit – and illustrates the value of knowledge management. Moreover, the empirical application of the framework by Bailey and Clarke (2001) can be considered a step forward in the research on the topic.

The starting point of this paper was the author's observation supported by existing literature that the academic research on knowledge management and the managerial practice of knowledge-intensive organizations are somewhat distant from each other. This is significant since the knowledge management discipline was originally motivated by managerial needs (e.g., Wiig, 1997). It may be so that scholars nowadays face a strong pressure to publish methodologically and theoretically rigorous studies in highly ranked journals, which leads the research into certain direction. In a slightly different direction are the practitioners' "messy real life problems". In other words, in academia, there is pressure to produce generalizable, statistically proven theoretical models while the practice is more about the art of muddling through various problematic situations and seizing opportunities in a given context. Further research – if the goal is to decrease the academia-practice gap and improve the relevance of knowledge management research – should focus more on embracing the managerial reality and less on designing studies that are by default easily publishable. Perhaps this could offer means to discover something that will be relevant and beneficial for the managers as well as something really novel for the academic audience.

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