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Knowledge management and the practice of knowledge sharing and learning at work: a case study

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This article offers a critique of knowledge management. The critique is empirically based on the case study of a Danish software production company's (A-Soft) knowledge management strategy of implementing an information technology (IT) tool known as 'knowledge centre' (KC). The article argues: (1) the discourses on knowledge and learning informing KC and everyday practice are incompatible. KC conceptualizes knowledge as a resource that can be stored and retrieved from databases, and learning as an individual acquisition. The company's existing practice of knowledge sharing and learning seems better conceived from a situated and embodied perspective, seeing knowledge as an enactment inseparable from action, and learning as social participation. (2) The management's preoccupation with implementing technological solutions for codifying, archiving, and creating global access to information is conflicting with the practitioners' focus on seeking context-rich information through collegial networks. Moreover, it is suggested that cultivation of a culture where viable communities of practice and collegial networks can flourish may be more important than technological advancement. (3) The strategy of exercising knowledge management through control and ownership invokes a discourse that threatens to subjectify the employees as replaceable resources in a lifelong learning imperative.

Introduction

Knowledge has become a desired object of management in the new economy, presumably because of the central role it plays in economic growth. 'The only—at least the main—producers of wealth are information and knowledge' (Drucker, 1993, p. 167). Unfortunately, the obvious interest in managing knowledge is not echoed by an immediate ability to do so—some kind of transformation is required in order to make knowledge manageable. The idea of knowledge management was popularized with Nonaka and Takeuchi's book on knowledge-creating companies (Nonaka & Takeuchi, 1995), suggesting an agenda of transforming tacit knowledge into explicit

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knowledge. Tacit knowledge should be explicated and separated from the knowledge workers, so that the knowledge resources do not go home at night. When first the company's intellectual capital is transformed into explicit knowledge, it can easily be stored in computer databases and made accessible for the right people at the right time.

A large part of the knowledge management literature focuses on making knowledge accessible for conventional management through ownership and control (Kreiner, 2002, p. 112), and on using information technology (IT) in order to accomplish this ideal. The IT perspective has been dominating, with up to 70% of the publications written by IT specialists focusing on technical aspects such as database design and knowledge warehousing (Easterby-Smith *et al.*, 2000, p. 790). Sometimes, knowledge management is identified entirely as a technological issue. 'Knowledge management is the use of technology to make information relevant and accessible wherever that information may reside' (Microsoft Website, quoted in Brown & Duguid, 2000, p. 117).

Despite the resources invested, the policy of knowledge management has proved difficult to accomplish in practice (Lucier & Torsilieri, 1997). Research articles discussing these difficulties either accept or reject the agenda of explicating tacit knowledge through the application of IT. Articles pointing towards problems of measuring intellectual capital (Marsick & Watkins, 1999, p. 207) or codifying knowledge (Van Zolingen & Streumer, 2001) can be read as accepting the agenda. Articles pointing towards a lack of attention to social factors (Ruggles, 2003) or towards problems of splitting knowledge and action (Brown & Duguid, 2000, pp. 119–120) can be read as criticizing the agenda.

This article criticizes the knowledge management agenda of explicating tacit knowledge through application of IT. The critique is empirically based on the case study of a Danish software production company's (A-Soft) knowledge management strategy of implementing an IT tool known as knowledge centre (KC). It will be argued that:

- The knowledge management discourse informing A-Soft's strategy of implementing KC conceptualizes knowledge as an entity that can be stored and retrieved from databases, and learning as an individual acquisition. The company's existing practice of knowledge sharing and learning seems better conceived from a situated and embodied perspective, seeing knowledge as an enactment inseparable from action, and learning as social participation. The article argues that conceptual incompatibility may explain the working community's resistance to KC. Moreover, it questions the conceivability of conventional approaches to management of knowledge through control and ownership.
- The focus on implementing technological solutions for codifying, archiving, and creating global access to information was found to be in dissonance with the practitioners' focus on seeking context-rich information through collegial networks. The article argues that the company's overly technological approach to knowledge management was counterproductive to the goal of enhancing knowledge creation and sharing. The article suggests that cultivation of a culture where viable

communities of practice and collegial networks can flourish may be more important than technological advancement.
- Finally, the article argues that the KC strategy of exercising knowledge management through control and ownership invokes a discourse that threatens to subjectify the employees as replaceable resources in a lifelong learning imperative.

The article's critique of knowledge management is theoretically grounded within distributed, embodied, and situated approaches to cognition, knowledge, and learning. Research on distributed cognition points out that knowledge and competence do not reside in the person-solo but in the person-plus environment (Perkins, 1993). Moreover, that cognition, knowledge, and learning are distributed in a network of relations between the people and the artefacts of social practice (Pea, 1993; Hutchins, 1996). The argument of embodiment suggests primacy of bodily activity in cognition, knowledge, and learning (Dreyfus, 1992, 2001), relating knowledge to the activity of a human knower. The notion of situatedness states that knowledge is not detachable from social practice (Lave, 1988; Greeno & Moore, 1993). Instead, knowledge refers to activity relations between person and environment—knowledge is an enactment.

Knowledge as an enactment refers to an activity—not a thing (Brown *et al.*, 1989). Knowledge as an enactment is always contextual—not abstract. Knowledge as an enactment is reciprocally constructed within the individual–environment interaction—not defined objectively or created subjectively. Knowledge as an enactment is a functional stance on the interaction—not a 'truth' (Barab & Duffy, 2000, p. 3). This perspective stresses the dynamic and relational character of knowledge as a capacity to act in social practice (Greeno & Moore, 1993). A consequence of this perspective is that it becomes a contradiction in terms to search for a location of knowledge in employees' heads or in companies' databases—knowledge is in practice.

The case study

The article reports a segment of broader theory-building case study research exploring organizational learning in the everyday work of supporters in a middle-sized Danish software production company (Elmholdt, 2003a). The organization (A-Soft) has approximately 400 employees. A-Soft's main product is a highly complex integrated software solution customized to the unique workflow of every single customer. A-Soft is one of the world's leading developers and suppliers of software solutions within its business area, with customers worldwide. The case study research was conducted from 2000 to 2002, with two intervals of three months in the field. The research methods were participant observation (Spradley, 1980) and semi-structured interviews (Kvale, 1996). Formal interviews were conducted with 20 employees and one manager, and of these, 14 employees were interviewed twice in two years. The focus of the case study was everyday work and learning in A-Soft's Service Division where approximately 100 people are employed. The Service staff are given the name of 'supporters' in this article. The main tasks of the supporters are to help customers

through the production start phase, supporting acute problems, and upgrading existing systems.

Participant observation was carried out by the author. The focus of the first period in the field was the training of newcomers. The second period in the field focused on work and learning in everyday practice. During the first period in the field, the knowledge management strategy of KC was introduced and implemented. The implementation of KC was not intended as a focus of attention in the case study. However, as the weeks of the first period in the field past, a growing dissonance between the management and the employee discourse on KC caught my attention. I began paying attention to informal talk about KC, asking questions about KC when talking to managers and employees during participant observation, included questions about KC in the interview guide for formal interviewing, and studied the technological tool itself.

The rise and fall of A-Soft's knowledge centre

In spring 2000 A-Soft introduced 'knowledge centre'—a new corporate portal for knowledge creation and sharing. The portal is a virtual space where A-Soft employees can publish and find documents and drawings containing information about the company's products, workflow, troubleshooting, prospective products, management strategies, organizational structures, employee information, and so on. The publishing, search, and retrieval functionality was the backbone of the original KC, whose objective was stated as follows:

> The objective of A-Soft knowledge centre is to create an organizational memory that: (a) Captures critical and broadly relevant knowledge and makes relevant, updated knowledge and experiences available to the organization. In this way, the risk of bottlenecks is reduced and the organization will depend less on individuals. (b) Forms a common basis for targeted and effective future initiatives. (c) In the long run, increases the collective intelligence of the organization. (A-Soft knowledge centre)

The statement describes KC as a giant memory containing the knowledge of the organization. The idea of creating a shared memory was to make the organization less dependent on individuals. This mission statement resembles the knowledge management strategy of Nonaka and Takeuchi (1995), aiming at objectifying the tacit knowledge of the organization in order to make it accessible to every person and make the organization less dependent on individuals. Seen from a management perspective, the problem of having the organization's knowledge stored tacitly in the everyday practice of the employees is that they go on vacations, leaves of absence, parental leave, find new jobs, and so on. The aim of KC was to preserve knowledge by explicating, objectifying, and storing it in databases, and thereby overcoming human bottlenecks, and make knowledge easily accessible and retrievable at all times by any employee with access to a network computer. This can be read as a strategy of making knowledge accessible for conventional management through ownership and control.

Two years after the initial release of KC, an internal user study was carried out by the A-Soft Knowledge Centre Group,[1] asking employees what programs they open

first on a normal working day. The result showed that nobody mentioned KC as one of the first four. Only 2 out of 12 interviewed employees mentioned KC at all, and both as number five. The Knowledge Centre Group concluded, '… the state of A-Soft KC has reached a fatal point of dissatisfaction'. The case study reported in this article is fully independent from the internal user study. However, the case study confirms the user study's findings, showing that the only functionalities of KC that most employees use on a daily basis are the functions for searching and finding telephone numbers, office location, and photos of people. The employees' mistrust of KC may be illustrated by the emergence of 'KC light'—a minimal version of the real knowledge centre containing only the functionality for finding personal details: names, telephone numbers, email addresses, office locations, and pictures. 'KC light' was not developed on the initiative of the management; it popped up as a reaction from below. 'KC-light' was developed and published on the company's server by an individual employee. The release of 'KC-light' can be interpreted as a reaction against the management's policy of making KC the main tool for knowledge sharing. However, it might be objected that this interpretation is too speculative, as it is not based on an interview with the employee who developed 'KC-light'. Alternatively, the development of 'KC-light' might be interpreted simply as a creative employee's attempt at making his everyday work easier.

Perhaps because of the problems in creating an organizational memory, the management's focus moved towards the development of knowledge maps. The idea of knowledge maps is not to explicate and objectify knowledge in databases but to explicate who knows, what knowledge is needed, and where knowledge is needed. The means have changed but the goal is still to control knowledge in terms of its production, distribution, and access. The knowledge maps depict areas in which the organization needs competences (e.g. database set-up, Word set-up, UNIX, etc.). The management, in collaboration with anonymous colleagues, rates the employees on a four-level scale according to their competences within each knowledge area. The knowledge map is separated into a public section and a personal section. Colleagues can use the public section to find out who knows what. The personal section, which is accessible only by the individual employee and the management, is used, for example, for planning further education and for negotiating salary.

The Knowledge Centre Group's user study included a review of the knowledge maps and found that they were little used. Discussing this finding, the report noticed that the maps were not yet sufficiently updated, which lessened their validity and influenced their use negatively. Furthermore, it was noticed that the knowledge maps focus too much on technical skills and neglect soft knowledge areas such as language skills and personal interests. In conclusion, the report stated that knowledge maps might potentially stimulate cross-organizational community building and knowledge sharing by helping employees to locate competent colleagues across departments and by establishing cross-organizational networks.

Considering that establishment of widely differentiated collegial networks was stressed by the interviewees in the case study as the single most important factor in order to become a competent supporter in the working community, it seems feasible

that the knowledge maps might potentially become a useful tool. However, it is questionable that insufficient updating and overly technical categories fully explain why the knowledge maps (yet) fail to fulfil this potential. An additional explanation might be sought in the fact that a major motive for the management to develop knowledge maps was to obtain a tool for controlling who is contacted and asked questions. The goal was to avoid the situation in which a few central old-timers were asked all the questions, and this was achieved by appointing a 'knowledge person' in each area who should be asked, and by desisting from displaying all the knowledge areas of experienced old-timers. It is likely that these initiatives have weakened the employees' trust in the system's usefulness as a tool for establishing a functional collegial network.

The rise and fall of KC is a tentative heading for this story in that KC still formally exists; however, it never rose to the gloom and glory predicted. The story as outlined here focused on the policy of A-Soft's knowledge management strategy. The remaining part of the article focuses on the everyday practice of supporters' knowledge sharing and learning, which is used as a backdrop for criticizing the applied knowledge management agenda of explicating tacit knowledge through application of IT.

Competing discourses on knowledge and learning

The difficulties of implementing the ideas of knowledge management might be related to competing discourses on what knowledge and learning is. The KC policy statement was shown to conceptualize knowledge as an entity that can be separated from action and stored in databases. The employees' resistance to KC will be argued to invoke a competing notion of knowledge as an enactment inseparable from action. Moreover, the KC policy statement was shown to articulate a notion of learning as an individual acquisition. The working community of supporters is argued to build on a competing notion of learning as participation (Elmholdt, 2003b). The difficulties of implementing KC are interpreted below as a clash between competing discourses on knowledge and learning.

The metaphors of knowledge as entities and learning as acquisition of entities by the individual subject are deep-seated in western psychology. Within learning psychology, cognitive perspectives are the main proponents of these metaphors, understanding the human being as a rational rule-following and symbol-manipulating device that processes information through an input–output relation with the world (see Elmholdt, 2003a). The human mind and the computer database are understood as functionally alike (Vera & Simon, 1993, p. 2).

One aspect of A-Soft's knowledge management strategy illustrating the entity metaphor is the publication policy of 100% correctness. When KC was first introduced, the publication policy was that only 100% correct documents should be put into the organization's memory—we do not want to remember something that is incorrect. This policy builds on a notion of knowledge as an entity that can be stored away and preserved for the future. However, reviewed from the perspective of

enactment, the question of how to guarantee that only 100% correct knowledge is preserved in the databases of KC is false. Rather, the quality of the stored documents should be understood as a matter of practical usefulness. The idea of 100% correctness and preservation for the future is seen as unattainable—knowledge is always situated in concrete practices. Viewed as such, a document conveying the 100% correct 'best practice' on how to implement a new software solution may prove unhelpful in solving the everyday messy problems encountered in a concrete implementation situation.

The policy of 100% correctness threatens to turn KC into a management relic portraying 'best practice' but failing to depict actual everyday practice. Reviewed from this perspective, it is predictable that the knowledge centre might prove useful in illustrating the shared standards of support work. However, in everyday work the support staff will turn to other means of knowledge creation and sharing. The feasibility of this prediction is supported by the case of Jens' home page, which is an informal information portal run and updated by the old-timer supporter Jens. This homepage is frequently accessed as a source of information in the everyday work of supporters. It could be that the popularity of Jens' homepage is related to the fact that it is grounded within the everyday 'messy' practice of providing support.

The demand for 100% correctness was moderated after a while, not for the conceptual reasons outlined here but because KC experienced a dearth of material: few employees dared to publish their documents, and as such signalled authority to provide a definition of 100% correct knowledge. The effect of reducing the accuracy requirement was negligible, which could be explained by the existence of well-established habits and a lack of any real effort to change them.

Reviewed from the perspective of participation, it is necessary to reinterpret what can be learned through searching, retrieving, and reading documents. Viewed from this perspective, the KC documents are socially situated artefacts containing information that might be searched, retrieved, and translated into knowledge. As such, KC might become a resource for learning. However, a knowledge creation and sharing portal such as KC can never become a sufficient medium for learning the practice of being a competent supporter.

Preoccupation with technological issues and lack of attention to social factors

Implementation of IT systems is a matter of creating organizational changes, which is understood here as an interplay of social and technological issues. It is argued that the process of developing and implementing KC was characterized by a preoccupation with technological solutions and a lack of attention to the existing social practice of knowledge creation and sharing. A-Soft's preoccupation with technological solutions is recognized by the management, pointing out that '… we have a tradition for applying technological solutions, also when the encountered problem is not primarily technological' (Doris, manager). A preoccupation with technology has also been pointed out as common in the literature on knowledge management (Easterby-Smith

et al., 2000, p. 790), and difficulties in implementing the ideas of knowledge management have been related to lacking attention to social factors (Ruggles, 2003). The following draws attention to the primary role of collegial networks in everyday creation and sharing of knowledge, to the function of electronic resources, and to norms for balancing the use of collegial networks and electronic resources.

In studying the work of supporters, it appeared that knowledge creation and sharing take precedence in everyday practical problem solving. Moreover, it appeared that everyday practical problem solving involves the enrolment of multiple knowledge resources. The following statement illustrates the complexity of applied knowledge creation and sharing strategies in everyday practice—integrating strategies of searching and encoding electronically represented information with the strategy of asking colleagues:

> I start by structuring what I need to know—find out what the problem is. Then I search information; if it is something simple I will look it up in a manual or somewhere else (electronically), and if it is more difficult find the person who knows something about this kind of problem. He may possibly send you off to see someone else. (Hans, support, two years)

The statement emphasizes that in difficult cases—when the problem is not straightforward—one would make use of the collegial network in order to resolve the problem. This strategy, which is characteristic of the everyday work practice of supporters, reveals the collegial network as the basis of knowledge creation and sharing, and electronic resources as a superstructure. In the case study interviews the development of an extended collegial network was described as the single most important aspect of becoming a competent supporter. The following interview statement underscores the primary importance of building an extended collegial network, and questions the usefulness of KC's knowledge map functionalities as a means of creating a viable collegial network:

> Bjarne: If you do not have access to a collegial network, you will have a hard time getting access to the necessary information. They (management) are trying to make us use KC, but I do not really believe that the employees are buying it. There are many publications in KC but I do not read them, and that is also my general impression.
>
> Claus: Do you think KC is useful in order to create a collegial network?
>
> Bjarne: No, you have to go out and pop by people's offices and have a chat with them. It is good to know each other a little bit; what the person's private situation is and things like that.
>
> Claus: What have you done to develop a collegial network?
>
> Bjarne: I try not always to send an email, but sometimes to walk down and talk to people instead, to find out if they can help me to solve the problem. (Bjarne, Key Account Manager, four months)

Bjarne rejects the notion that access to knowledge maps can replace the creation of a collegial network, pointing out the importance of knowing people personally. The development of a collegial network implies more than searching a knowledge map and pairing names with photos. The statement can be interpreted as an argument for why

electronic resources such as KC will always remain superstructures in the everyday practice of knowledge creation and sharing.

The creation of collegial networks takes precedence in the microenvironments of everyday work. The following statement illustrates the informal channels of knowledge creation and sharing established by the physical proximity of sharing an office.

> Just overhearing a phone conversation gives incredibly much. We always interrupt—we cannot keep quiet—when one of us receives a task, we discuss it with each other. I have many times, when I can hear from the telephone conversation what was asked—and Joe says—'well, is it Windows 2000, then I think'. I am listening and thinking at the same time; you cannot avoid it. It is incredible how much you learn from each other. (Jason, supporter, five and a half years).

The next interview statement illustrates the creation of collegial networks as a process that branches out from the microenvironment of everyday work:

> Claus: How have you built up your network?
>
> Rikke: Primarily through sharing office with two highly experienced old-timers who know who knows; also cross-organizationally. In the beginning, I often used them as a reference when calling to ask e.g. a developer for help, and I always wrote down on my phone list what the person's competences were. I have also extended my collegial network by having lunch with Lise (old-timer supporter) at 11.30 am. I normally have lunch at 12.00, which means that I see different people in the canteen. Lise was having lunch with someone who has been working here for 10 years or more in a different department. I have been acquainted with these people by having lunch with Lise. Because I know them from lunch, I mostly get really good 'service' when calling them with a problem: 'hold on I'm coming down to help you'. If you do not know people personally, they may easier say: 'you will have to wait till later'. I do not think it can ever be different. (Rikke, supporter, two years)

Rikke describes how her collegial network developed by branching out from the microenvironment of the office she shared with two old-timers, and from the relation to the supervisor on her first customer assignment. The physical proximity of more experienced colleagues is emphasized in most interviews as highly important for knowledge creation and sharing.

In summary, the examined interview statements question the potentials of electronic resources for knowledge creation and sharing, and point towards the primacy of collegial networks. Nevertheless, the working community of supporters still restricts the use of collegial networks. Learning what it takes to become a competent supporter in the working community implies adapting to disciplinary norms for balancing the search for information electronically and the use of collegial networks:

> You must be careful to keep a good balance. Sometimes you should read before you ask, and sometimes you should ask before you read. However, you should never do just one thing or the other. (Jason, supporter, five and a half years).

Several interviewees touched upon the importance of balancing searching electronic information and using the collegial network. Newcomers must learn how to search

information electronically in order to avoid bothering the collegial network with trivialities. However, only extreme deviations are punished; for example, employees who repeatedly ask colleagues for help instead of trying to solve the problems themselves may gain a bad reputation. Another extreme deviation is those socially withdrawn employees who prefer to work on problems in isolation, who may gain a bad reputation for not contributing enough to solving the community's shared workload and for not sharing knowledge.

In conclusion, the examined interview statements illustrate the fact that support staff understand the collegial network as the basis of knowledge creation and sharing, whereas the electronic resources of KC are seen as a superstructure. Moreover, several of the interview statements point out that this relation cannot be reversed—KC cannot become the basis that structures the collegial network. This argument questions the feasibility of the management's interest in knowledge maps as a means to control the creation and sharing of knowledge. Arguably, an interest in controlling the development of collegial networks through knowledge maps might eventually hamper the knowledge creation and sharing it was intended to support.

Technology of surveillance

Finally, the article suggests a Foucault-inspired interpretation of the difficulties of implementing KC, arguing that the implied strategy of exercising knowledge management through control and ownership invokes a discourse that threatens to subjectify the employees as replaceable resources in a lifelong learning imperative. Foucault's objective was '… to create a history of the different modes by which, in our culture, human beings are made subjects' (Foucault, 1982, p. 208). According to Foucault, we are not simply subjects as such; we are made subjects through processes of subjugation and subjectification. In particular, Foucault has studied how modern forms of subjectivity have been established through surveillance strategies in prisons, clinics, schools and factories (Foucault, 1977) and confessional practices in different therapeutic settings (Foucault, 1980). The modern reflective self has been established through practices of self-examination, self-observation, and self-analysis. Such practices are invested in power relations, and this forms the basis for Foucault's claim that power is productive and normalizing rather than purely repressive. Power produces subjectivities, above all self-reflective subjectivities. Seen in this light, the clash between policy and practice of knowledge creation and sharing might be seen as a power struggle over the production of subjectivities—as a clash between interests governed by the working community of supporters versus interests governed by the management. Following these lines of thought, KC might be interpreted as a sophisticated disciplinary technology, seeking to inscribe management interests as self-governing discipline in the employees.

The design of KC endows the management with a number of surveillance and control possibilities. KC equips the management with tools for counting how much each employee has published and with tools for monitoring each employee's development of competences. These mechanisms work completely anonymously—

the employees know that management is equipped with tools for external surveillance and control, but they do not know whether or not the tools are used. Foucault has argued, illustrated by the famous example of the *panopticon*, that technologies of this kind have the power to produce self-reflective and self-governing subjects. The *panopticon* is a prison structure developed in 1787 by the father of utilitarian moral philosophy, Jeremy Bentham. A *panopticon* consists of an annular building at the periphery and a tower in the centre. From the tower, a single person is able to monitor the people in the backlit cells of the peripheral building, without their knowing when they are watched. The cells become 'small theatres, in which each actor is alone, perfectly individualized and constantly visible' (Foucault, 1977, p. 200).

The technology of KC potentially has the power to internalize a *panopticon* in the self of each employee, redirecting managerial surveillance into *self*-surveillance or *participatory* surveillance. Self-surveillance has been identified as the most common form of surveillance in post-bureaucratic organizations (Driver, 2002). This does not imply that power and control disappear, but that they change to participatory self-control. Viewed from this perspective, the employees' resistance to using KC can be seen as resistance to being produced as certain kinds of subjects. We are always produced as subjects, Foucault argues—subjectification is an effect of practice. The implementation of KC in practice will necessarily produce the user in a new way. The subsequent question is to ask what is so threatening about the subjectification offered by KC. I propose two interpretations of how KC might threaten employees:

1. The external surveillance technology of knowledge maps 'threatens' to internalize as a *panoptic* structure in the individual employee—conflating the management's motives of increased competitiveness with individual motives of self-development. The effect is production of flexible self-monitoring subjects, always seeking to develop new competences—lifelong learning becomes an imperative.
2. The KC objective of creating an organizational memory, in order to reduce the risk of human bottlenecks and become less dependent on individuals, represents a Taylorian scientific management ideal of rational bureaucratization, which threatens to subjectify the employees as replaceable resources. The employees can hardly share an interest in developing a policy that aims to make the organization less dependent on individual employees. The ideal of building the 'organizational memory' is supposedly very difficult to fulfil, as argued above. However, even the potential of such a structure might threaten employees' job security, and weaken their position to negotiate salary and work conditions.

I do not deny that lifelong learning might be a good thing, but I question the conflation of self-development ideals with the hegemonic discourse on knowledge as a resource to be controlled and owned. The knowledge management agenda of explicating tacit knowledge through application of IT threatens to subjectify employees as replaceable resources in a lifelong learning imperative.

Conclusion

This article has offered a critique of the knowledge management agenda of explicating tacit knowledge through application of IT. The critique was based empirically on the case study of A-Soft's difficulties in implementing KC—a computer-based technology for enhancing and controlling the company's creation and sharing of knowledge. The conclusions and implications that might be drawn are discussed below.

The article has argued that conceptual incompatibility between KC and everyday practice obstructed successful implementation of A-Soft's knowledge management strategy. KC was structured in accordance with a conception of knowledge as an entity that can be moved and stored in computers and humans alike, whereas the company's existing practice of knowledge creation and sharing was better conceived from a situated and embodied perspective, seeing knowledge as an enactment inseparable from action, and learning as social participation. This finding suggests that the guiding metaphor of knowledge as an entity that can be owned and controlled implies a superficial understanding of the knowledge informing professional practice.

The article has also argued that the company's overly technological approach to knowledge management was counterproductive in relation to the goal of enhancing knowledge creation and sharing. The empirical findings revealed that the focus on implementing a technological solution for codifying, archiving, and creating global access to information was in dissonance with the practitioners' focus on seeking context-rich information through collegial networks. This finding questions the feasibility of a knowledge management strategy focusing on explication of tacit knowledge and application of IT. Moreover, the finding suggests that cultivation of a culture where viable communities of practice and collegial networks can flourish may be more important than focusing on technological advancement.

Finally, the article has argued that the employees' resistance to KC might be interpreted as a power struggle over the production of subjectivities. KC was interpreted as a disciplinary technology, seeking to inscribe the management's interests in controlling knowledge as self-governing discipline in the employees. This implies a conflation of the employees' self-development ideal with the company's ideal of increasing competitiveness. The consequence is a practice threatening to subjectify the employees as replaceable resources in a lifelong learning imperative. This finding questions the pragmatic as well as the ethical feasibility of the strategy of exercising knowledge management through control and ownership.

Note

1 A-Soft's Knowledge Centre Group was established to develop and implement A-Soft's knowledge centre strategy. The Knowledge Centre Group was broadly represented, put together by software developers, human resource staff, mid-level managers, and one board member.

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