The Midas Touch in Knowledge Management Projects – Beware, Your Wish Could Come True*

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Abstract: Like king Midas, the champion of a Knowledge Management (KM) initiative might find herself in an awkward situation *because the wish came true*. Successful KM initiatives *can* lead to problems. The case study presented in this article details how a consulting company attempted to support its dispersed staff of consultants through the introduction of a web-based KM portal. The application became popular – too popular in the sense that it led to a deterioration of certain types of knowledge exchange. It achieved the intended goals, but created unforeseen problems.

In the article we explore KM practices and explore the role of contexts for IT-mediated KM. It is suggested that the need to view IT-mediated KM in various wider contexts is even more important than in many other forms of IS implementation. The KM activities are not only related to identifiable tasks and work processes, but also to social interaction, learning and other dynamic processes in the organisation.

Keywords: knowledge management practices, IS success, electronic communities, knowledge management, knowledge documentation, case study, ba

1. Introduction

Articles on knowledge management ventures tend to describe successful – or sometimes unsuccessful – projects. However, the practice from which the stories are collected is not necessarily black or white. Success is a complex issue and apparent success can depend on vantage point and time frame. The successful achievements of project goals can, in a wider context or studied over a longer period of time prove to create unforeseen problems.

In many attempts at IT-mediated Knowledge Management (KM), seemingly good ideas have failed to catch the intended users' attention. Suggestions to remedy such failures have included facilitating the technical access to the application, providing incentives for use of the application (giving rewards or posing authoritarian demands), identifying "killer applications", etc. But achieving the sought-after use is not necessarily completely beneficial. Like king Midas, the champion of a KM initiative might find herself in an awkward situation *because the wish came true*. Successful KM initiatives *can* lead to problems.

The case presented in this article details how a consulting company attempted to support its dispersed staff of consultants through the introduction of a web-based KM portal. The application should facilitate the planning, co-ordination, execution and dissemination of lessons learned. By including a highly useful scheduling tool, the threshold to initial and continued use was overcome. Following the case that far, it appears as an enviable success, but looking further, the success had its drawbacks, which will be described below.

In this article we will explore Knowledge Management practices and in particular we will, in light of the case study, explore the role of contexts for IT-mediated KM. *The aim of this article is to further the understanding, both from a practical and a theoretical perspective, of the interplay between IT-mediated solutions and the context in which they are to be used*: from a *practitioner perspective* to reduce the risk of investing in solutions that turn out to add little or no value; from a *research perspective* to explore cases where the picture describing failure or success is blurred and to learn more about IT-mediated solutions and their contexts. What first may appear as the "perfect" solution may later turn out to be far from "perfect" when put in its context. Or, put differently: "beware; your wish could come true".

In the following sections of the article we will first discuss some previous work on Knowledge Management. Then there is a description of the case study Epsilon,

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followed by a discussion. Finally we make some concluding remarks.

2. Theoretical foundations

Managing knowledge has always been important in organisations, but the idea of knowledge management as a central task in organisations was forcefully brought to the fore ten years ago in books like *The Knowledge-Creating Company* (Nonaka and Takeuchi, 1995) and *Wellsprings of Knowledge* (Leonard-Barton, 1995). Information systems theorists and practitioners were quick to see and promote the potential of IT in knowledge management ventures, and with the growth of the Internet and the www, connections between knowledge management and web technology began to appear (e.g. Davenport and Prusak, 1998). Nonaka and Takeuchi (1995) suggested that knowledge development to a large extent is a social process, rather than the result of isolated efforts by individuals. The SECI model (Socialisation, Externalisation, Combination and Internalisation, ibid, p. 72) described different modes of knowledge development and knowledge transfer, and Nonaka and Toyama (2003) strongly stressed how knowledge evolution moves through these stages in a never-ending spiral. The knowledge acquired through socialisation can at a later stage be made explicit, formulated and externalised, and thus more easily shared with others.

The concepts Socialisation and Externalisation have also led to ideas about different types of knowledge and how they can best be shared. If important knowledge in the organisation can be externalised, there is a potential for the use of IT-based communication and databases for storage and dissemination of knowledge. If the important knowledge is less easily verbalised, socialisation becomes a stronger candidate as preferred mode of transfer, and the role of technology – and other structures for encouraging knowledge transfer – should be focussed on helping people identify others possessing relevant knowledge and getting in contact.

In a study of Chief Knowledge Officers and the knowledge management initiatives they promoted, Earl and Scott (1998) found that they either had a preference for developing technical systems for managing structural capital or a preference for encouraging social interaction to develop and disseminate knowledge through the interaction between individuals. Hansen et al (1999) coined the labels codification and personalisation for these two strategies, and claimed that it would be better for a company to pursue one strategy or the other, rather than trying to mix them and attempt to do both at once. However, Choi and Lee (2003), studying Korean companies, found that combining a technical and a social focus seemed to provide better results than conforming to the recommendations of Hansen et al. For knowledge management proponents, it can also be heartening to note that the companies in their study that did not engage in systematic knowledge management of any kind performed significantly less well in terms of market share, growth rate, profitability, and innovativeness than the companies that were actively practising knowledge management. However, Choi's and Lee's findings are based on correlations. It is thus not ascertained that knowledge management produced superior performance; it could be that successful companies also practice knowledge management more actively than less successful companies.

Attempts to further the development and transfer of knowledge in the organisation can be expected to profit from an understanding of what constitutes relevant knowledge and how work is performed and decisions made. However, it has been convincingly demonstrated that people often have an incomplete or even erroneous conception of how they work and think; there can be a marked difference between their espoused theory and the actual theory-in-use (Argyris and Schön, 1974; Argyris, 1993). In the tradition of situated work practices, it has also been demonstrated that it can be difficult for someone trying to design IT support for others to really comprehend their perspective, their situated work practice (Suchman, 1995).

In line with the difference between espoused theory and theory-in-use, studies of knowledge workers attempting to acquire IT support have also shown that

it can be difficult to fully grasp ones own situated work practice (Schultze and Boland, 2000). In their study, it took competitive intelligence (CI) analysts almost a year to realise that the knowledge management tool they hoped would facilitate their work actually counteracted their situated work practice. Given a somewhat distorted view of ones work practice, and a strong belief in technical solutions, it is easy to create a mismatch between the solution provided and actual needs. Davenport, in his book *Information Ecology: Mastering the Information and Knowledge Environment* (1997) places a focus on the human aspects of knowledge-sharing, emphasising the risk with a too strong focus on technical applications to support knowledge sharing in organisations.

Understanding the situated work practice that a knowledge management initiative intends to support can thus be expected to be difficult in terms of actually realising all the knowledge and actions involved in performing the job. In addition, the norms and values which govern the work conducted be the role holders – and govern the evaluation of the execution of the role – can be even more difficult to discern and discuss. However, such an understanding is likely to be crucial for achieving useful – and socially feasible – information system support in an organisation (Checkland, 1990; Suchman, 1995; Westelius, 1996).

The difficulties involved in projects for acquiring IT support have also been discussed seen from many other perspectives, for example how to identify software project risks (e.g. Keil et al, 1998), ways of trying to involve users (e.g. Asaro, 2000) or problems related with the interpretive space provided and required by the IT support (Thompson, 2002). But when discussing difficulties and success or failure there is also a need to include aspects of timing, i.e. *when* an implementation of some sort of IT-based support is a success or a failure (e.g. Larsen and Myers, 1999; Scott and Wagner, 2003). Scott and Wagner conclude that judgements of "success or failure are closely related to the timing of evaluation and the vantage point from which such observations are made." (ibid., p. 310) What appears to be a success at one point in time does not necessarily have to be a success at a later point in time.

Another important aspect is what makes knowledge exchange and development take place. It has been noted that people participate in knowledge exchange primarily out of community interest rather than out of self-interest (McLure Wasko and Faraj, 2000). Others would suggest that a certain degree of common interest and a shared goal is a necessary precondition (Nonaka and Toyama, 2003; Brännback, 2003). The concept *ba*, the place or setting, virtual or physical, but definitely social, has been advanced as being of pivotal importance. According to that line of thought, building and supporting *ba* should be a key objective for those who want to practice knowledge management. IT support can help facilitate some tasks and exchanges, but social interaction is absolutely essential to a *ba*, which in turn is central to achieving lasting knowledge exchange and development (ibid.).

3. Methodological approach

The case is based on written and oral accounts by key informants. These key informants have worked in the organisation during the period described in the case. They have then reflected on their experience and documented the process and their reflections in writing. We have had access to this documentation and also discussed their perceptions and reflections with them. This has provided us not only with raw data and reflection *in* action from practitioners, but also with their problematisations of the process created through reflection *on* action (cf. Schön, 1983). Our access to an existing account of the process has also reduced the degree to which we, as researchers, have shaped the practitioners' image of the process through our questions (cf. "The principle of interaction between the researchers and the subjects", Klein and Myers, 1999). The key informants have also read our account and accepted it as a fair description of their understanding of the process. However, the use of key informants does not guarantee that all members of the case company would share the views presented here (cf. "The principle of multiple interpretations", Klein and Myers, 1999).

We explore the provocative case by relating theories from the knowledge management and information management fields to see if they appear to explain the development that appeared as unexpected to the practitioners (cf. "generalising from theory to description", Lee and Baskerville 2003.)

4. The Story of Epsilon1

Junior enterprises is a type of consulting company with strong knowledge management ambitions. These consulting companies are formed by university students, who want to apply and develop their knowledge in actual, commercial projects while still at university. To support these enterprises, JADE - The European Confederation of Junior Enterprises, was founded in 1992. Now, twelve years later, JADE counts 20.000 student members, organised in 150 consulting associations in eleven European countries.[2] Junior enterprises are non-profit organisations, but the students get paid for their work, and successful consultants can even get well paid for their efforts. The organisation we will discuss in this article is such a consulting company, here called "Epsilon" (a pseudonym) formed some fifteen years ago.

4.1 From business concept to going concern

When the consulting company Epsilon was formed in the late 1980's it was a collaborative effort by nine students. Today, close to 75 consultants – students and doctoral students – work in the organisation, and over the years, more than 400 projects have been executed. Acquisition of projects is promoted in five areas: market research; process analysis and process improvement; strategy development; software training; and IT projects. Running such a large enterprise involves administrative activities and a substantial amount of administrative paperwork. It is no longer sufficient to just deal with a specific consulting project at a time in isolation.

A central challenge is to offer clients competent services while providing challenging and interesting tasks to all affiliated consultants and achieving knowledge transfer from more to less experienced members. Working in interesting projects is fun, tangible and monetarily rewarding. Organising and running the organisation in such a way that it continues to serve its goal of being a training ground for junior consultants is less concrete, and the rewards for those attending to this side of the business are less obvious. Administrative functions and support functions exist, but are typically not remunerated. No specific personnel are hired for these tasks at Epsilon; all members, junior as well as senior, are required to contribute in the back-office work. There is marketing and public relations, personnel acquisition and internal training, project support (providing standardised documents and data on completed projects), technical support (responsible for network administration and technical equipment in the office) and customer services (responsible for client contacts and the alumni-network). But as in many other consulting companies, the size of these back-office functions is kept low, and neither status nor remuneration is at a level with prestigious customer projects. However, these tasks are not just an administrative burden; continued success of the company hinges on that these tasks are attended to – and competently managed.

4.2 The KM system idea takes shape

The administrative burden for a consultant working in a project has also increased as Epsilon has grown, and the consultants started to complain. In 2001, the IT function suggested that a web-based knowledge management and administrative system should be designed and implemented. The idea was that such a system would reduce paperwork and increase the potential for IT-mediated knowledge management. The knowledge management potential consisted of that such a system would facilitate the submission of and access to reusable documents, lessons learned, etc. It could make it easier to transfer experience over time in an organisation with a high staff turnover, and it could possibly make it easier for an individual to find out who had

[1] We are grateful to Nicolas Kaiser and Fabian Mueller, members of Epsilon, for bringing the case to our attention and sharing their experience with us.
[2] JADE - The European Confederation of Junior Enterprises, http://www.jadenet.org/downloads/JADE_description.pdf, accessed 2004-06-07

a specific type of experience, who had participated in which project, etc. The existing system was to a large extent paper-based, and the computerised information systems that existed were only accessible in the office. Consultants in the field, at clients or elsewhere, did not have access to these files. The chief directors and the board of project managers decided to go ahead with the proposed intranet solution. A year later, the IT platform was ready to use.

The executive officers of Epsilon, elected by the associate consultants each year, assign project managers to the customer projects that are secured. The formal contracts with the clients are signed between the client and enterprises set up by the students participating in a project, and the project manager runs the project independently, if everything goes well. The Junior enterprise itself is thus not the client's legal counterpart, but monitors the project, ensuring quality and intervening if something goes wrong. To allow for this quality assurance, the project managers submitted weekly project status reports and attended the weekly board meetings. These and other meetings, and the exchange of documents between the projects and the Junior enterprise office were widely recognised as important parts of the necessary and central knowledge management, but nevertheless they were experienced as a burden, and a lessening of this burden would be appreciated. To the project managers, submitting documents, accessing data at the office and liaising with the back-office functions was viewed as cumbersome and the cause of extra travelling. To the people in project support, getting the documents they needed from the projects, meeting with project members to discuss lessons learned, and encouraging or pleading with the project teams to document their experience was a constant uphill struggle. Those responsible for training found it difficult to accurately assess the training needs of different members for lack of data. Efficient customer service and alumni networking was threatened by poorly updated contact information. Easy data access and well-designed data collection using the Internet, allowing consultants remote access, was viewed as a potential solution to many of the problems.

The intranet that was implemented in the summer 2002 provided users with remote access via username and password. The entrance page could be individualised according to the user's preferences to allow for quick access to frequently used functions. A personal calendar that could be synchronised with Outlook provided a structured way to record appointments and other scheduled obligations. It was also possible to import course schedules from the University servers to facilitate calendar management for the individual student consultant. An internal message server providing the possibility to send short messages to individuals or groups and to attach documents, facilitated communication and exchange of work in progress without relying on external mail systems. A document management tool provided structured access to documents and links relevant to the daily work in projects. A project information section provided online possibilities to submit project summaries, experience reports, etc.

4.3 The favourable reception of the KM intranet

The calendar function with its link to university course schedules, served as a killer application encouraging the consultants to start accessing the intranet and then continue to access it on a regular basis. Internal messaging, access to documents and the possibility to submit documents regardless of your own physical location soon also became appreciated functions. Many of the intended users actually used the platform. Others were more reluctant, and were coaxed into using the intranet because some functions were now only available through this channel, such as schedules for meetings and booking of rooms at the office. Still others continued to refrain from using the intranet, but on the whole there was substantial use, and the intranet seemed to fulfil the expectations that had been placed on it. However, soon a number of unexpected changes started showing. The efficiency-enhancing application had negative effects for some aspects of knowledge management.

4.4 Unexpected changes

There was a change in personal interaction. An intention behind the intranet venture was to reduce the amount

of face-to-face meetings. This worked, but what had not been realised was that in addition to the instrumental document exchange or data transfer function of these meetings, they had served informal, networking and trust-building functions. The frequent face-to-face interaction had made people get to know each other and had provided opportunities to sense how you got along with each other. Especially the loss of informal occasions for meetings between junior members and project managers led to a narrowing of the circle of people being considered when staffing new projects. The new members in the organisation were not included to the same extent as before.

The increased reliance on written documents and written messages initially also led to misinterpretations and mistakes. It took considerable calibrating to learn what combination of meetings, telephone conversations and written communication that was needed to ensure sufficient reliability in the information exchange. Previously, when interaction had mainly been face to face, there had been ample opportunities for instant feedback and real-time interaction to sort out interpretations and check what the counterpart had and had not understood. This "quality control" of the communication had been so prevalent and inconspicuous that the organisational members did not notice it until they saw the effects of its absence.

The previous culture in Epsilon with frequent meetings encouraged teamwork and knowledge exchange across project borders, and it was usual that people would sit and work at the office, and join in each other's discussions. Now, the stronger focus on time-efficient work routines has led to a marked decrease of these creative encounters.

Those responsible for developing the intranet solution have become enthusiastic about the possibilities of the technical solution and have tried to maximise the use and usefulness of the intranet. As personal development is a driving force in the organisation, the organisation's management group has little power to steer them into another direction. So far, the advocates of the technical solution see more advantages than drawbacks of increased functionality and use, and continue to further the intranet.

To redress some of the problems, the management group of Epsilon has now decided to reintroduce obligatory weekly meetings. It is not yet obvious that this will solve the problems, but it can be expected to help.

5. Discussion

The knowledge-management-supporting intranet application in Epsilon became popular, and served its intended purposes to such an extent that many of the consultants hardly met face to face. The resulting loss of small talk, trust-building with new colleagues and personal contact led to a deterioration of certain types of knowledge exchange, and to a sharp decline in the capability to integrate new consultants in the operation. In the end, a certain amount of obligatory meetings had to be introduced to come to terms with the unintended consequences of the (too) successful Knowledge Management tool.

The problems met could be seen as a result of an over-emphasis on efficiency and a neglect of the importance of building and supporting *ba* (Nonaka and Toyama, 2003; Brännback, 2003). The existing *ba* in the established practice of meeting face to face and of frequently working in a co-located environment was not recognised for what it was. Instead of understanding that the social contact turned the office with its organised and spontaneous meetings into a functioning *ba*, the visionaries behind the organisational development and the supposedly KM-supporting intranet introduced a virtual space that did not have *ba* qualities.

The concept *ba* includes a common goal for those who are to participate in the *ba* and engage in knowledge sharing and development. In Epsilon, the members could in principle be expected to share the idea that knowledge exchange was important and that the consulting projects should be carried out to the satisfaction of the clients. Thus the differences in basic goals illustrated in Brännback's study of biotechnology organisations (Brännback, 2003) were absent in the Epsilon case. Still, the new, IT-mediated collaboration did not provide a fully functional *ba.* The findings from the Epsilon case study do

not support the idea that people tend to participate in knowledge exchange primarily out of community interest rather than out of self-interest, which has been suggested in previous research (McLure Wasko and Faraj, 2000). In the Epsilon case, the findings rather suggest the opposite. A problem that arose when the new intranet facilitated organisational participation at a distance in Epsilon, was that the individual and the immediate project concerns overruled the community interest that expressly constituted a loadstar in the organisation. This could also be linked to the discussion of the human factor for example in Davenport (1997).

Yet another way of expressing this is to view it in light of an over-emphasis on task-oriented matters and a neglect of person-oriented matters (Lundeberg, 1993) or too much focus on the technical application and to little attention to the human aspects of knowledge-sharing (Davenport, 1997). Phrased differently, there was a focus on harder issues (such as accessing documents and schedules) and a neglect of softer issues (such as social small talk). This in turn could be interpreted as a lack of understanding of the importance of these softer issues.

The case of Epsilon could be viewed as an example of practitioners' incomplete understanding of their own situated work practices, which is in line with previous research on the implementation of IT tools for KM (e.g. Schultze and Boland, 2000), and on the difficulty of distinguishing how you work and think (espoused theory) from how you *believe* you act (theory in use) (Argyris and Schön, 1974; Argyris, 1993). When changing a work situation and introducing a new tool, in this case IT-based, there are consequences that may be difficult to understand at first. One key issue here is to what extent the actors in an organisation can realize this and then "correct" the situation that has arisen and make necessary changes. In Epsilon, the management group introduced weekly meetings as a form of compensation for the loss of small talk, etc. On the one hand, damage to the corporate culture of knowledge sharing had then already been done. A more individualistic and short-sightedly production-efficient culture had emerged. On the other hand, the experience of the loss of informal knowledge sharing and trust building helped members realise the importance of small talk and socialising.

One question to ask is *when* a KM initiative is successful (cf. Larsen and Myers, 1999; Scott and Wagner, 2003). A related question is: what does a successful KM initiative really mean? In the Epsilon case, the KM initiative was successful – in some senses *too* successful. There is an old saying "The road to hell is paved with good intentions" (Samuel Johnson, 1709-1784). In this case there were many good intentions, but the result was not the expected. This could be seen in light of handling change processes and how change efforts can be mishandled (Watzlawick et al, 1974). Watzlawick et al (ibid) have suggested three basic ways of mishandling change: (A) action is necessary but is not taken, (B) action is taken when it should not be, and (C) action is taken at the wrong level. The Epsilon case can be seen as an example of action taken at the wrong level. That is, there was a too strong focus on building something "successful" without taking the larger context into consideration. The action was taken on an IT-mediated KM initiative level, rather than on an organisational level.

When shifting focus to an organisational level the whole discussion could be viewed in light of organisational learning (e.g. Senge, 1990). When an IT-mediated KM initiative like in Epsilon is implemented, the question is in what ways this influences the learning processes in the organisation. The situated work practices are changed, and given that they are not fully understood to begin with, the consequences for learning and organisational development may be difficult to foresee. This in turn implies that KM initiatives in general need to be viewed, analysed and understood from different perspectives. Literature on IS implementation tends to focus on analysing and understanding work processes. A thorough understanding of work processes is important for KM ventures, but in addition, the organisation has to be viewed and understood as a learning system too, and the social activities, roles, norms and values are at least as important to understand as the actual work performed.

6. Concluding remarks

In this article we have aimed at furthering the understanding of the interplay between IT-mediated KM solutions and the context in which they are to be used. In the KM field, much attention and effort has gone into trying to develop tools that are used. Higher use has then been expected to be the measure of success. However, based on the Epsilon case study, we have found that it is not always good when your wish comes true. That is, you may build successful IT-mediated KM solutions, but still not succeed. More specifically we want to point to three issues:

- KM initiatives need to be viewed in their wider contexts and there is a need to understand these contexts. *If not*, a successful KM initiative may fail in important respects due to its incompatibility with its context.
- The Epsilon case study supports previous work saying that people tend to have a limited knowledge about their own work and it is difficult to anticipate consequences of a change, such as an introduction of a KM initiative.
- The word "successful" is problematic without stating "successful according to whom and to what criteria". That is, an IT-mediated KM initiative may be successful on an IT-system level (useful and used system) but unsuccessful on an organisational level (unwanted effects in the organisation).

Consequently, one thing we can learn is that when developing KM solutions one may need to keep King Midas in mind – the wish may come true, and then what? King Midas managed to persuade the Gods to cancel his wish, and then went to the opposite extreme; he became obsessed with the simple and basic joys in life, and avoided all things elaborate and splendid. We do not advocate following in his footsteps, and neither do we suggest that we should stop attempting to launch knowledge management initiatives. Instead, we believe that trying to imagine the success of the tool in its wider context, and attempting to view it from different perspectives and evaluate it according to different criteria, can help expose ways beforehand in which the success of a KM solution could lead to undesired effects in the organisation. That insight can then be used to modify the initiative in time. We do not claim that it will be easy to achieve foresight, but we believe that it is worth trying.

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