

Individual and Social Barriers to Knowledge Transfer

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Abstract

It is often stated, that people use knowledge for their own benefit and that they share it only grudgingly. This may be partly true because our society has deep cultural traditions which tend to discourage knowledge sharing. Even memories from school confirm the picture of knowledge as a treasury that has to be protected and hidden. During examinations the use of shared potentials is castigated as a 'crib' and as an attempt to deceive; what counts are the individually produced results.

On the other hand, the necessity of sharing knowledge in a company in order to use the economic resource knowledge efficiently and effectively is said to be one of the critical success factors nowadays.

Through analysis drawn from literature and from own research experiences and knowledge management projects we discuss the various individual and social barriers that hinder people to share and transfer their knowledge. From this analysis we can draw some suggestions how to overcome these impediments.

1. Introduction

In a world of rapid changes like growing worldwide competition, new industry structures, advances in sciences and technology, and changing customer behavior knowledge becomes a key economic resource [10, 12, 25, 28, 29]. Knowledge Management should cover the tasks to exploit the resource knowledge where Information Technology (IT) takes an integral part of each knowledge strategy.

Knowledge management is comprised of the phases or activities of knowledge generation, transfer, accumulation, adoption, and diffusion. Similar knowledge management life cycle models are known [18]. Knowledge transfer means knowledge sharing within an enterprise between individuals and groups. This gets special attention because knowledge as an asset increases in value with use [23].

Not the individual knowledge or expertise of their members but the collective knowledge of their teams is a core asset of many firms. This synergetic behavior of knowledge is the economic driver for knowledge transfer. The vision of knowledge management may be a working environment, where employees are working like:

- filling best practices in knowledge databases,
- filling forms and screens with their experiences and information,
- teaching, tutoring, mentoring colleagues, discussing and dialoging openly with colleagues,
- writing reports, and preparing written analysis papers, providing personal notes and papers to colleagues,
- giving openly hints and remarks, providing helpful suggestions and actively offering answers to colleagues
- carefully documenting insights, writing procedures and handbooks when working in improvements processes
- using existing knowledge databases for their tasks.

In this broad vision people recognize that working together openly without holding back or protecting vital pieces of knowledge will result in more productivity and innovation than any one could reach individually. These approaches and processes should be supported by information systems to assure efficient and effective usage of resources. But how can we achieve this?

Information Technology industry offers a lot of tools and techniques to support knowledge management, but despite all of these offerings, many firms experienced that other than technical issues are critical. Experiences from recent literature and own projects show a clear direction:

"In fact, if the people issues do not arise, the effort underway is probably not knowledge management. If technology solves the problem, yours was not a knowledge problem" [25, p. 88].

„When you start talking about knowledge, it's really about people, relationships, communities, and a new way of working" [S. Beaty, Executive of Shell Oil, cit. in 27].

Therefore, people issues are meant to be critical for the success of knowledge management and knowledge transfer initiatives. In the following two paragraphs we categorize the impediments for knowledge transfer caused by these soft factors into individual and social barriers.

The two categories of individual and social barriers should by no means indicate, that the issues are independent. Indeed, these cultural issues are highly dependent, but are usually observed on different organizational levels, the individual and the group level. They have in common, that they hinder organization members to contribute to the knowledge sharing processes.

2. Individual Barriers to Knowledge Transfer

2.1 Loss of Power

Knowledge can be used to take action and to enforce spheres of influence, to pass knowledge to colleagues might grant some of these potentials. Those who do not own this knowledge are deprived of the capacity to act or to influence respectively. From a business perspective, this applies to knowledge about customers, competitors, suppliers, procedures, recipes, methods, formulas etc.

In this sense someone who passes on knowledge to a colleague loses the exclusiveness of his or her influence, which might have suggested some job security and respect. "Knowledge is power" is the well-known line to describe situations, where experts with rare knowledge have the highest reputation and monopolies of knowledge causes knowledge hoarding instead of knowledge transfer [24]. This is a common phenomena in many companies.

Especially in situations where job security is low knowledge as a power becomes vital for the individual and knowledge might be seen as a kind of insurance against losing the job [4].

In special industries like professional service firms (consultants, marketing and advertisement experts, lawyers, accountants, tax advisors) the employees are competing directly with each other through their special knowledge, gifts and talents. It might be part of the individual culture of the high performing employees that they voluntarily entering into the competition for scarce seats on the career path because they like to compete and to excel each other on principle [23]. But the drawback of the competition is obvious: knowledge workers would be very cautious to share openly their knowledge with colleagues, because they possibly give up an individual lead. In these companies often competition and corresponding incentives and rewards urge to build a unique expertise in a certain area and to prove that expertise for clients, not to share it with colleagues.

2.2 Revelation

Passing on knowledge to colleagues or putting working results into a knowledge database may be felt to be , and considered as, a revelation, because it proclaims that this knowledge has a certain value and rareness.

If this assessment is not shared by other users of the database, embarrassment may happen. And too often there are some hasty colleagues who hurriedly point out and suggest their "necessary" improvements just to emphasize their own expertise.

Similar to this is the well-know "not-invented-here" syndrome which describes the attitude not to use foreign knowledge because it this could interpreted as inability to provide an own solution.

2.3 Uncertainty

Especially younger and less experienced people may feel some uncertainty, because they can not judge if their working results represent valuable knowledge for others. Especially they cannot estimate if their knowledge is too general or too well known or that some results are too specific for a special situation and therefore useless for colleagues in other situations. The positioning on the scale of 'general' to 'specific' is not trivial at all and, thus, generates uncertainty.

2.4 Motivation

Transferring knowledge may be seen as additional work, because of the time for documentation, communication etc. Some employees do not expect reciprocal benefits from transferring their knowledge because they do not believe these benefits or they do not experience it.

And even if people do expect payback for their contributions the somehow natural question "what's in it for me" is often not clear for employees, which are suffering from a lack of motivation. There is a need that the employees have some self-motivated creativity and some sense of "care-why" [23] in order to foster knowledge sharing.

Part of the problem is that typically the benefits of the contribution to a knowledge database is gotten by a different stakeholder at a later point in time, the benefits usually won't be earned by the provider but by his/her colleagues [18]. Therefore precondition of the participation in knowledge transfer is the assumption of an equilibrium, a balanced give and take between colleagues who are sharing knowledge.

The insight that knowledge sharing can only be beneficial if everybody provides his knowledge unselfishly may have charm theoretically. But in day to day practice the

benefit is to uncertain, therefore the individual's commitment into transferring and sharing knowledge fails.

3. Social Barriers

3.1 Language

In some companies a certain lack of a legitimate language [12] is perceptible, which is known and acceptable for all involved people and can carry personal knowledge. This covers the need for a common language to communicate knowledge and special language features like analogies and metaphors to externalize tacit knowledge hidden in individual mental models, viewpoints, working models, schemata, paradigms and beliefs [17, 19].

3.2 Conflict Avoidance

Attitudes of conflict avoidance and some conservative habits may prevent the transfer of knowledge, if this knowledge contains some new thoughts or innovative ideas. If most leading members of an organization are not comfortable with change and not willing to take risks, new ideas may be covered very easily, different views and perspectives would be hidden, knowledge not culturally legitimated may be suppressed ("don't rock the boat" attitude).

This is the reason why Fahey and Prusak [6] call it one of the eleven deadliest sins of Knowledge Management not to establish, challenge and align a shared context for the members of an organization. This shared context requires engagement in open, honest, supportive, and critical dialogue to develop different and/or new views.

3.3 Bureaucracy and Hierarchy

More bureaucratic and administrative organizations show formal procedures, which prevent the transfer of knowledge and new ideas. Strong hierarchical enterprises prevent even cross-functional communication, all the more cross-functional cooperation or knowledge sharing.

3.4 Incoherent Paradigms

A lack of coherence between the personal intents of the individuals and the paradigms of the organization (which cover strategic intent, vision, mission, strategies, values etc.) can cause difficulties to articulate and justify personal beliefs which do not fit with the ruling paradigms of the organization [12].

In this situations explicating knowledge may be difficult because articulating particular knowledge or ideas

may not be culturally legitimated through the paradigms of the company.

Even in many companies the ruling paradigms, the vision of the future, the mission of the companies, the main strategic issues are not known by all employees because they are not well enough communicated. In this case the uncertainty about unknown paradigms hinder the articulation of ideas and knowledge.

4. Empirical Evidence

There are empirical results which show that cultural aspects like employee's individual and social barriers are critical for knowledge management initiatives. The benchmarking study of the American Productivity & Quality Center [2] list culture, rewards, and support among the most important issues within knowledge management.

The well-known survey by Ernst & Young [25] list "culture" as the far most biggest impediment to knowledge transfer: 54% of the respondents marked it as an impediment. Next issue on the ranking was top management failure to signal importance (32%), which is an indicator that paradigms of the companies are not well enough communicated or understood within the companies. The far most biggest difficulty in managing knowledge is changing people's behavior, which is basically their behavior of transferring and sharing knowledge with their colleagues. From two German surveys we know similar results: the most important key success factor of knowledge management is corporate culture [8], by far the most important barriers are lack of time and disdain of the importance of knowledge management [3].

These studies and surveys show on a high level that cultural issues made by individual and social barriers are among the leading problems of knowledge management. Unfortunately till now there are no studies differentiating and ranking the single barriers. Also there is no measurement of the impact of possible countermeasures which can be taken by management.

Additional to the citations at the top evidence from literature shows that a cultural shift is necessary in most companies because knowledge sharing runs counter to the values that our society and our companies instill in individuals: "... traditionally, organizations have rewarded their professionals and employees based on their individual performance and know-how. In many organizations, a major cultural shift would be required to change their employees' attitudes and behavior so that they willingly and consistently share their knowledge and insights." [1, p. 6; see also 4, 25, 27]. Experts agree that for the success of knowledge management initiatives cultural issues are more important than technical ones [1, 11, 25].

Interestingly there are strong references to a negative correlation between actual management techniques of Business Process Reengineering (BPR) - which often result in downsizing - and knowledge management: "Given the downsizing in many U.S. corporations during the past decade, it is not uncommon to find negative cultural aspects with respect to knowledge" [4]. Main reasons are:

- BPR projects result in organizational designs that disrupt the flow of information and knowledge because traditional working routines are broken [2, 26].
- As an outcome of many BPR projects employees have to leave the company. In the context of knowledge management, that means the company loses a significant amount of tacit knowledge together with these employees [2, 5, 10, 13, 18].
- BPR projects and their results boost the competition among the employees and therefore deteriorate the climate for openly sharing knowledge [12].
- One of the main objectives of BPR is the reduction of redundancies, but knowledge management initiatives require a significant amount of redundancy within the organization to afford time for communication and reflection [19, 20, 28].

Therefore it will be important in future research to analyze in more detail the dependencies between management techniques that aim to increase efficiency and operational strength and knowledge management that aim to foster knowledge transfer and sharing.

5. Countermeasures

Until now there is no complete integrated methodology, no set of procedures and policies to address systematically all of the above individual and social barriers. Some approaches should be discussed further.

5.1 Concern and Trust

A precondition for knowledge sharing within organizations is a attitude of concern and trust among the organization members. Krogh [12] calls this „care” and defines it as serious attention, a feeling of concern and interest within an organization. His concept includes phenomena like trust among the people, interest for different viewpoints and experiences, access to help, lenience in judgement, courage to voice opinions, to allow experiments and to take risks.

Necessarily, organizations have to strive for a culture of accepting mistakes and not to penalize errors, a climate of constructive conflicts giving organization members the chance of "falling forward". Organizational development processes should develop a common set of ethical standards and values for an organization and should achieve a

consensus of accepted working practices and habits. These standards and values should be stated explicitly and communicated through the company.

5.2 Leadership

Knowledge sharing is also based on consistent, reliable, plausible behavior of management. Management must positively communicate that they are thoroughly convinced that knowledge needs to be "nurtured, supported, enhanced, and cared for" [21, p. 53] and that they even financially support knowledge management initiatives [27].

Management must afford time for communication and reflection. There must be organizational slack that provides permission and time to allow employees to network [12, 28].

Mutual trust is necessary among all organization members to openly share. Trust results in common expectations of reliability, consistency, and plausibility. Trust reduces the fear that others will act opportunistically. Likewise management must act as examples for knowledge sharing, they have to walk-the-talk and give up knowledge hoarding first. Members of a profession or a community accept standards of behavior and working habits from their peers [23], therefore management must act as peers to give an example in knowledge sharing.

5.3 Rewards and Incentives

Special rewards and incentive methods can act as extrinsic motivators, so that employees are willing to share and transfer knowledge.

Some companies make positive experiences with the provision of personal recognition and reputation when people have contributed to knowledge databases or actively participated in knowledge sharing. At example simple rewards are used by Texas Instruments, where they created an annual award named "Not Invented Here, But I Did It Anyway Award" [4] to reward usage of other employees' knowledge. Buckman Labs reward the top 150 "knowledge sharers" (judged by knowledge managers) with a new laptop and an incentive trip to a resort [4]. AMS honors contributors to the knowledge center with a bronze plaque at the headquarter and publishes regularly a top 10 list of most frequently used contributions [11].

Incentives schemes may also foster knowledge sharing, although especially empirical studies on financial incentives showed quite different results. Nevertheless many companies incorporated issues of knowledge sharing into their compensation plans and promotion policies. So the big consulting and accounting firms commonly base personal evaluations in part on how many contributions are made to knowledge databases, how many new employees

people have been tutored and how many training courses have been designed [23, 27].

Other administrative actions may define clear responsibilities for tutoring and mentoring within an organization. Ongoing programs which systematically develop organization members (continuing education) can foster common habits and attitudes and can support communication among organization members. On a smaller scale, at the end of bigger projects and transactions time and effort for explicitly debriefing should be provided to learn systematically by experiences. This lessons learned could be systematically analyzed and stored for access through other employees.

5.4 Communities of Practice

An attractive approach to foster knowledge transfer and knowledge sharing is to develop communities of practice within companies. These groups of professionals care about certain topics by enhancing the ability of its members to think together, to stay in touch with each other, to share ideas with each other. These informal networks, sometimes also called knowledge fairs or clubs, competence centers or creativity centers, are groups of professionals, informally bound to one another through a common class of interests and problems and a common pursuit of solutions.

People who are exposed to common class of interest and problems often develop a common language to communicate and develop a sense of mutual obligation to help each other [14, 15]. This phenomena can be used to overcome some of the individual and social barriers to knowledge transfer within the community of practice.

To support the building of communities of practice time should be given to organize and attend meetings, to create bulletins, to sample a skills directory. Communities should have the necessary tools and techniques to form, evolve and develop. At least they need a forum, either physically or electronically, to spark collaborative thinking and working not just make merely static presentations of information and ideas.

In order to get acquainted with each other community members should start to discuss operational topics and problems on a regular base. Moreover they build up and refine a common language and common understanding of approaches and solutions. During and after this initial phase the communities should decide themselves what kind of knowledge they want to share and how to share it.

In general, communities of practice are networks within an organizations, where people with common interests and problems can meet. Through their common language and work habits they develop over time more trust and openness to transfer and share knowledge openly.

5.5 Codification vs. Personalization

In special industries, where knowledge of professional experts is a core asset, careful management of this asset has special importance, e.g. in management consulting and law firms. On the one hand, management is responsible that the company is as independent as possible from individual professionals. On the other hand the business of these firms is partly a "people business", where the very personal and individual link between clients and consultants or lawyers is critical. This special situation requires special approaches to manage knowledge. Hansen/Nohria/Tierney observed [7, p. 107] that management consulting firms employs two very different knowledge management strategies which addresses cultural issues very different. The firms pursue one of these two strategies predominantly and use the second one to support the first.

One strategy ("codification strategy") centers on Information Technology: the knowledge is carefully codified and stored in knowledge databases and can be accessed and used by anyone. With the other strategy ("personalization strategy") knowledge is tied to the person who developed it and is shared mainly through direct person-to-person contact [7].

With a codification strategy knowledge is extracted from the person who developed it, is made independent from the person and stored in form of interview guides, work schedules, benchmark data etc. and then searched and retrieved and used by many employees. Personalization strategies focus on dialogue between individuals ; knowledge is transferred mainly in personal meetings and one-on-one conversations.

The individual barriers are significantly lower with the personalization strategy, because the individual professional keep the control through the whole knowledge management cycle. The individual is recognized as an expert and is cared for. In fact knowledge management strategies focussing on personalization could be called communication strategies, because the main objective is to foster personal communication between people. Core IT systems with this strategy are yellow pages (directories of experts, who-knows-what systems, people finder database) which show people with whom they should talk regarding a given topic or problem. The main disadvantages with personalization strategies are a lack of standards and the strong dependencies from the communication skill and will of the professionals.

5.6 Organizational Design of Enterprises

Some organizational designs can foster intraorganizational collaboration. To produce involvement and commitment partnerships and other forms of ownership of the enterprise by their employees can be utilized [9, 16]. Moreover, these organizational forms address the hesitation of professionals with very specialized knowledge to work within strong hierarchies and in working environments with strong regulations [23].

5.7 Office Design and Construction

To lower disadvantages of bureaucracy and formal communication ways modern shop and office layout reduce the distance between workers and executives to foster ad hoc, informal and face-to-face communication. So the office space of executives are more open and easily to access for employees. Similar effects are caused by placing the offices of engineers in the middle of the production hall instead of placing them in a far distant research and development center [22].

6. Summary

In this paper we concentrated on the cultural aspects of knowledge transfer. Opportunities to foster knowledge transfer with Information Technology are manifold. E.g. Information technology can be an important support structure for a community of practice. Various kinds of communication systems and computer supported collaborative work systems can be considered in order to organize, formalize, maintain, distribute, apply and evolve knowledge within the community. Information technology can also help to summarize, combine, contrast, and integrate information for the community members.

But more important than technical issues are questions concerning people behavior on individual and group levels. The more experience we have with knowledge management initiatives the more people issues get important: "The role of people has also changed. Leading organizations see that their employees, instead of being a replaceable commodity, is the fundamental capability behind their whole existence and success ..." [28, p. 5].

Sharing information is not a matter of course, but "when it comes to sharing information ... a majority of the firms agreed that their leading challenge had comparatively little to do with information or technology -- and everything to do with changing behavior" [24, p. 14].

The new label "knowledge management tool" on many software products and "the undeniable fashionability of knowledge management" [13, p. 18-2; see also 6, 11, 14, 25, 27] give high attention to knowledge management. Probably the cultural issues are critical for the success of knowledge management initiatives.

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