

CREATING INCENTIVES FOR KNOWLEDGE SHARING

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Abstract

This paper deals with one of the key problems in implementing a Knowledge Management system – the problem of motivating knowledge sharing. Using two particular KM strategies of Personalization and Codification, I highlight some key problems in knowledge sharing and present some incentive systems that may alleviate the problems. I use the case example of McKinsey & Co. to illustrate the validity of my proposed suggestions.

Introduction

Knowledge Management is an area that has received significant attention in the last few years. From Internet portals, to consulting firms to academic literature-almost everywhere people have spent significant steam on improving our understanding of how to manage the knowledge better. Yet a McKinsey survey of executives from 40 companies in Europe, Japan and the US showed that many of them think that KM process is only about Information Technology and how getting the right KM tool is the key to achieving KM success (Hauschild et al. 2001).

However KM definitely is not only about tools. There are many human factors that need to complement an IT change (Bresnahan et al. 2002) Implementing a KM tool too involves many complementary changes that need to predate and accompany the system installation. For instance one thing that needs to be evaluated before getting a tool is what kind of knowledge exists in the firm and what kind of knowledge is needed to improve performance.

The field of knowledge management may be recent. But the field rests on the heads of many giant concepts such as organizational learning, organizational knowledge, learning organization (Easterby-Smith & Lyles 2003). A lot of existing literature deals with barriers to learning, knowledge-transfer, codification, etc. Yet there exists little in all the above literature that deals with the individual costs and benefits of knowledge management.

A cost benefit analysis from an individual employee's perspective might enable us to understand the failures that accompany many knowledge management efforts. What makes people come out and help each other learn and share their hard earned knowledge? And what incentives and motivations might the firm provide that create a culture of knowledge sharing?

To restrict the scope of this paper and to make it more tangible, I am looking for KS incentives in the case of two different KM strategies- the codification strategy and the personalization strategy (Hansen et al. 1999). The next section describes more in detail what these two strategies are.

Two kinds of KM strategies

Hansen et al. (1999) mention two KM strategies that are commonly used by successful consultancy organizations. Personalization strategy is used by the likes of McKinsey where knowledge is difficult to translate into a system. Instead knowledge about clients, industry and functions resides in the minds of the consultants and therefore McKinsey makes an effort to bring its consultants together in attempts to exchange knowledge. Computers in a personalization strategy merely facilitate the communication of knowledge. On the other hand, a firm such as Ernst & Young uses a codification strategy to manage its knowledge. A codification strategy assumes that key knowledge of the organization could be codified and stored in a computer system.

I feel that the costs and inefficiencies attached with the two strategies are different and therefore the incentive creation for the two approaches might also be very different. In each of the sections below, I will analyze the problems highlighted and the solutions offered from the perspective of these two different strategies.

Why are incentives important?

Why do we really need incentives for knowledge sharing? Why doesn't it help merely to provide the right IT tools? The reasons for this can be found in the characteristics of the knowledge sharing process and an understanding of what knowledge and information symbolizes.

Kim & Mauborgne (1997, p.67) note:

Unlike the traditional factors of production - land, labor, and capital – knowledge is a resource locked in the human mind. Creating and sharing knowledge are intangible activities that can neither be supervised nor forced out of people.

In fact there are human factors and market factors both of which make knowledge sharing difficult.

The Human Factors

Knowledge sharing is time consuming: There is a finite amount of time that is available during a workday and spending that time on working vs. helping a colleague or codifying the knowledge in some KM tool is a very clear trade-off to make in the absence of incentives. At Cap Gemini, consultants who are paid by the hour find it tiresome and inefficient to post their experiences to a system (Huysman & de Wit 2002). That sharing is time consuming is a problem both in the codification and the personalization strategies.

Knowledge is power: Knowledge is power. And if knowledge is power, then giving away power is something that is bound to get difficult. As people start hoarding their knowledge in the belief that they could manipulate this knowledge to ensure their own success, sharing becomes a myth. Also some individuals have reasons to doubt the value of their own knowledge; exposing it increases their perceptions of vulnerability (Huysman & de Wit). The power issue stays in both codification and personalization strategies.

Knowledge sharing involves trust: Since individuals amass knowledge at considerable expense of time, resources and energy, they would not simply give it away unless they are assured that they are handing this information in good hands and that there is a good chance of reciprocity. Davenport & Prusak mention 3 different requisites for trust: visibility, ubiquity and top-driven. Trust becomes relatively easy to incorporate in a personalization strategy, if the persons who are exchanging the knowledge are known to each other. However, when knowledge is being exchanged in distributed, global organizations where consultants fly out from different parts of the world to acquire knowledge on say clients or industries, then trust becomes difficult to establish even in the personalization strategy. In codification strategy trust establishment is the most difficult since it is difficult to control the recipient of the knowledge.

There is also trust from the point of view of the knowledge seeker. After all the knowledge seeker doesn't know that the knowledge that he/she is about to get is quality knowledge. This is relatively easy to manage in a personalization strategy because usually one person seeks another person only if he has some assessment of the worth of

the knowledge that they are about to get. However in the codification strategy, trust in the system becomes very difficult to achieve. Just by providing the system and hoping that people will look it up is a common misperception that people often live with. Unless people are confident that they will get good quality information in the system, trust in the KM strategy will be minimal.

	Personalization	Codification
Time consuming	✓	✓
Power	✓	✓
Trust	✓ Seeker usually trusts provider; Provider may not trust seeker	✓ Both provider and seeker may not trust the content quality and content use

Table 1: The Human Costs in the Two Strategies

The Market Factors

Davenport and Prusak (1998) compare the knowledge management world to a market place where there are knowledge buyers, sellers and brokers. However unlike a real market place (or probably like a real market place) there are many inefficiencies that exist in the knowledge marketplace which makes the incentive problem very grave.

Incompleteness of information: It is very difficult to understand who the person is who possesses the right knowledge. So matching the right buyer to the seller is very difficult. This is especially true in the personalization strategy where person A has to know who the person B is who has the right information on his client and industry. The problem is less acute in codification.

Problem of quality: It is difficult to establish before buying the knowledge what the quality is like. Therefore there are many chances of the knowledge being a lemon. What makes this problem worse is that even the seller sometimes doesn't know that the knowledge that he is she is selling is a lemon.

In codification, buyer has to use the filtering mechanisms or knowledge brokers to perceive what a good quality product is. From an organization's perspective codified knowledge is still easy to judge after it has been for a long enough period based on how often it has been accessed.

In personalization, the quality is hard to perceive unless one uses it. In fact both in personalization and codification, knowledge has to be consumed before the quality can be perceived. This aspect too makes knowledge market different from a commodity market (Fulk et al. 2004).

Problem of linking input to output: How does one decide whether a particular client gained is on account of certain knowledge that was provided by an individual? This is a problem that exists independent of the knowledge sharing strategy that the firm employs.

Uncertainty about need for knowledge: this issue exists because we may not know always what outcomes we are seeking. Foss & Mahkne (2003) call this the problem of "means and ends uncertainty". If one knew what ends they are seeking and are therefore only looking for means to that end then problem would be simpler. But often KM is trying also to deal with non-routine problems whose ends and means are not specified ex ante. What kind of knowledge should therefore be incentivized? In a personalization strategy, this problem would feed into the problem of what skills to develop in people, how to create expertise without knowing what areas are going to be the "fads" of tomorrow. Similarly in codification, what kinds of knowledge should be given prominence, greater monitoring. How specific should the codified knowledge be?

Not all cases would be facing all of these problems. There may be more certainty about ends in some cases for instance. Or there may be some clearly recognized possessor of knowledge who can be accessed. However, assuming (probably realistically) that all of these problems do exist in the knowledge market, what kinds of incentives would work

there? Can agency theories be applied here? What other solutions could be there? In what follows next, I look at some of the solutions that have been offered by organizational economists and organization theorists for the knowledge sharing issue in light of the problems mentioned above. Specifically I shall look at how knowledge sharing efforts could be monitored in the two knowledge strategies for different incentive systems.

Can we do without a knowledge sharing incentive system?

Could we really rely on the market forces or the existing incentive systems to take care of our knowledge management tools?

Letting the market work?

Reciprocity could be used as a payment for knowledge sharing (Davenport & Prusak 1998, Cross & Prusak 2003). Expert A may be willing to help Expert B simply because A expects B's help in future.

The Reciprocity principle doesn't work in a codification strategy as there may be a significant asymmetry between sellers and consumers of knowledge due to free-riding. However, this pay-off of reciprocity could be very effective in generating a good market-based system in the personalization strategy. But there are caveats. Even in a personalization strategy, reciprocity will take care of only expert-2-expert exchanges but expert-2-novice sharing may still need to be achieved through other means as Expert A may be unwilling to expend the time on Novice A if he expects nothing from Novice A. moreover, the issue of trust still remains among the human factors; and the problems of incomplete information and quality still remain among the market factors. Without an intervention by the firm, the market may not work very well even in the personalization strategy. What about letting the existing incentive systems operate as they are?

Existing Incentive Systems?

Individual pay-for-performance

If the executives are to be believed that knowledge management is only about the right tools then they would probably continue with their extrinsic pay-for performance kinds of incentive systems. Let us see what happens in such individual pay-for-performance systems. If effort is unobservable and the rewards are based on profits simply because profits are observable, then what we get is a classical Kerr (1978) kind of paradox or what Holmstrom & Milgrom (1991) denote as the problem of multi-tasking. Profits are a function of many factors such as effort, noise and knowledge. If we look at some of the variables that make up the profit function, efforts in knowledge sharing seem to have a very tenuous relationship with profits. On the other hand, a variable such as efforts towards one's own task has a more direct effect on profits. Contracts based only on profit may measure only a subset of the activities carried out by the agent that might result in dysfunctional behavioral responses (Prendergast 1999). Therefore not only is a pay-for performance scheme difficult to have in order to *promote* knowledge sharing, it might even be *counter-productive* to the existing knowledge sharing efforts. Orlikowski (1992) showed just this through her study of implementation of lotus notes. Since the employees were only rewarded for the "billable" hours, they did not make the effort to learn the new groupware that was introduced to share knowledge. Therefore individual pay-for-performance rewards may be orthogonal to the knowledge-sharing goal.

Team based pay-for-performance rewards

Individual pay-for-performance incentives are not very useful when implementing a KM system. What about team based pay-for-performance systems such as profit sharing systems? First, like most team based incentive systems this could lead to the problem of free-riding. While free-riding on effort could still be controlled through feelings of shame (Kandel & Lazear 1992) induced by peers, free-riding on knowledge sharing is difficult to control in such a system. This is especially so because it is difficult to monitor the KS efforts even by the peers. Sometimes only the person who is the possessor knows that he/she is defecting on their contract. Therefore internal pressures of guilt are necessary to accompany such reward systems. In fact feelings of guilt should be present even in a system that is not based on team based extrinsic rewards. How is guilt achieved? Through increased investment in team spirit/loyalty akin to what is witnessed in military (Kandel

& Lazear 1992). But in KS there is an additional problem. The individual himself may not know that he/she is defecting. It is sometimes difficult to evaluate one's own areas of expertise or knowledge. Through exercises aimed at increasing self-awareness and by increasing organizational/team loyalties, team-based pay-for-performance systems might work in even increasing knowledge sharing activities. This again shows that without an organizational intervention in the form of specific measures, even team-based performance pay systems may be unable to promote a knowledge sharing culture.

As an added caveat, if there are interdependencies between teams then pitting teams against each other may be a bad strategy as team members may be willing to share knowledge intra team but may refuse to do so with members of other teams. Osterloh & Frey (2000) suggest that if knowledge being exchanged is explicit or if the profit centers are independent operating units then extrinsic unit based incentives might prove to be beneficial. On the other hand, profit centers can be really detrimental to the concept of knowledge sharing if there are inter-dependencies between various profit centers. Profit centers lead to competition between individual units such that knowledge sharing is not achieved. Profit centers get especially murky when what is being exchanged is tacit knowledge. This is because it is difficult to ascertain the possession or transfer of knowledge when the knowledge is tacit because tacit knowledge by its very definition is difficult to observe.

Since the market forces and existing incentive systems -- both individual and team based may be difficult to use to promote knowledge sharing. In fact the existing system may create forces counter-productive to the implementation of a Knowledge Management system. Therefore I look next at some specific reward systems – both extrinsic and intrinsic -- that may be necessary to motivate employees to share knowledge.

Intervention to create Incentives for Knowledge Sharing

Individual pay-for-KS rewards (Promotions & Deferred payments)

Static rewards are difficult to achieve to reward individual KS efforts. This is because of the issues mentioned already such as incomplete *ex ante* information. Instead dynamic contracts for rewarding individual KS efforts are more likely to be fruitful.

Individual pay-for-performance alone is rarely the solution to the effort issue. This is especially so when there are multiple tasks to be achieved. Therefore, it is useful to employ a multiple instrument approach to offer a balanced package of incentives (Gibbons 1998). For instance, Cockburn et al. (1998) mention the example of the pharmaceutical firms that have two competing objectives: getting more drug patents and getting greater knowledge. While the first objective is easy to measure and reward the firms do not ignore the second goal. Instead they use promotion policies to reward the latter by promoting those scientists who are active in the research community. Academia is another example where individuals are rewarded dynamically based on their efforts over seven years. Over 7 years, it is assumed that the efforts such as knowledge sharing to the community could be evaluated using the publishing, teaching, mentoring records of the faculty. Other firms could follow similar strategies for achieving expert status. Prendergast (1992) explains how a dynamic approach might be suitable for cases where static measurement of effort is difficult. Firstly, when the future rents are high enough, individuals might be averse to reneging on their contract. Second, applying the law of large numbers, inferences drawn using a long enough period might be more accurate than static period inferences.

As far as evaluation, firms could use subjective measures such as reputation both in the case of codification and personalization strategies. Moreover for codification strategy, firms could also use objective measures such as a rating concept to evaluate the information provided by an individual.

Intrinsic motivation through Culture

Organizations could have really good extrinsic incentives and yet may not realize the full potential of their human capital if the employees are not intrinsically motivated (Osterloh & Frey 2000). If the incentives are outwardly said to promote knowledge sharing but the culture of the organization continues to exhibit competitiveness, the knowledge sharing

efforts may not be very successful. As I will show through the case example of McKinsey how possible this scenario is even in a knowledge committed organization such as McKinsey. In fact Edmondson (1999) suggests how psychological safety is one of the pre-requisites to create a learning organization where people do not feel scared to ask questions and to learn.

Von Grogh (1998) defines 4 modes of knowledge sharing in organizations characterized by the “Care”.

		Knowledge	
		Individual	Social
Care	Low	Capturing	Transacting
	High	Bestowing	Indwelling

In Low care situations according to Von Grogh, there would be individual hoarding or as he calls “capturing” of information. I feel that this hoarding will be demonstrated both in codification and personalization strategies. However, at a social level, Von Grogh talks about the transacting form of sharing that might still enable knowledge sharing. But transactions are only possible between people and therefore in a personalization strategy, there might still be some sharing of knowledge even in a low care situation as people transact game theoretically. However a codification strategy will be a complete failure in a low care situation where transacting behavior will be almost impossible to see.

High care could be induced through explicit incentives that reward care bestowing values. High care could also be espoused in explicitly held values, mentoring programs, training programs, etc.

Knowledge sharing at McKinsey & Co. (Barlett 2000)

Since one of the strongest and probably the most successful proponents of the Personalization strategy is McKinsey & Co., I thought it fit to provide a detailed account of how McKinsey motivates this knowledge exchange and sharing culture.

McKinsey has adopted a multi-pronged approach in trying to attack all the different aspects of the human and the incentive issues. Unlike what Hansen et al. mention in their

paper, McKinsey does codify a lot of knowledge too in the form of its Practice Development Network (PDNet). However Hansen et al. are right in suggesting that McKinsey uses more of the personalization strategy than the codification strategy. But the codification of knowledge definitely goes hand-in-hand with the personalization and even facilitates the sustenance of the personalization strategy.

I will now take the applicable issues and incentive systems from above and check how McKinsey resolves its issues and administers a reward system.

Trust in the expert: McKinsey does this by increasing the visibility of the expert. In fact, increased visibility of someone who is truly an expert also helps the system to know whom to reward.

Trust in the database: In promoting greater trust for the information available in the PDNet, McKinsey initially relied on the market system to sift out bad knowledge from good. Soon they also employed practice coordinators for each of their expert areas who could monitor the information available on the system.

Providing tools to increase expert matching: by creating yellow pages that provide information on people's expertise areas.

Reward system at McKinsey: Creating an incentive program was the most difficult part at McKinsey. The incentive program was to be created to ensure two things: that people would want to develop expertise and that people would want to share their expertise. Consultants would want to develop expertise only if they were suitably rewarded for it. McKinsey does this by creating special promotion tracks for such experts. Also consultants are evaluated at McKinsey based on their role as knowledge generators. Since rewards depend partly (or almost fully in the case of experts), it is important that the firm recognizes the development of expertise. This is done through increased visibility that also takes care of the trust in the expert knowledge. Visibility is increased through various mechanisms such as creating PDNet best sellers (rating of expert's online content), conferences and word of mouth. Since expertise is recognized and rewarded, that partly takes care of the issue of sharing. After all sharing increases the visibility that leads to rewards. However to ensure that the knowledge sharing is not skewed towards sharing between experts McKinsey tries to engage experts onto client studies. This allows the experts to help anyone on the study who need their expertise. Similarly line

consultants are regularly staffed by research and development projects (Davenport & Prusak 1998).

Creating the right culture: Finally McKinsey has to create a culture where knowledge-sharing is valued by everyone. This is done through the mentoring programs, creating communities, conferences, generating a vision where the Managing Director calls knowledge “the lifeblood of McKinsey” (Davenport & Prusak 1998). Even though McKinsey has been successful to some extent in creating a culture, there is still a major struggle to imbue that culture into daily routines. These include routines for evaluating achievements and for evaluating people. Changing the mental models of people is hard even if the incentives are trying to change them.

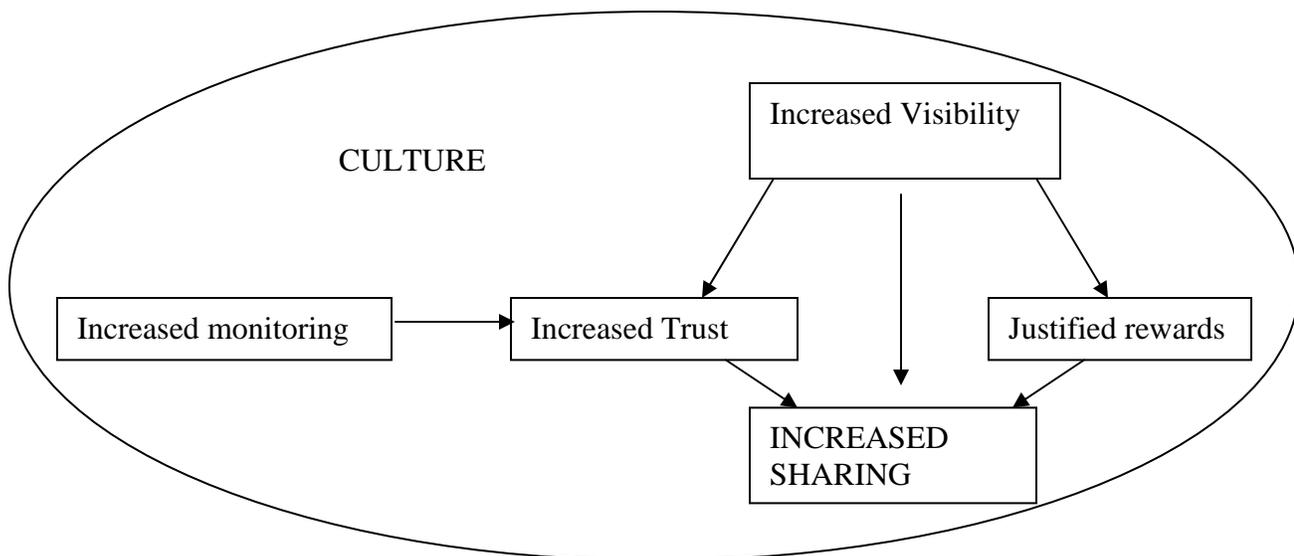


Figure 1: Creating a Knowledge sharing culture at McKinsey

Conclusion

As seen from the above analysis, assuming that knowledge sharing will work simply by installing the right technological tools may not be very wise. In fact leaving the current incentive system as is without incorporating for efforts for knowledge sharing may be extremely counter-effective for knowledge sharing efforts. Even rewarding knowledge sharing explicitly may work only partially. This is evident from the McKinsey case study where carefully planned incentive programs to motivate knowledge sharing still create

issues. The key lesson to take away from this piece of speculative analysis is that incentives need to be multi-pronged. Unless a whole-hearted effort to motivate knowledge sharing is used, knowledge sharing may only be a false hope and a distant dream.

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