

Knowledge Management Oxymoron's

Introducing Human Factors to Bring Theory to Practice

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Abstract: This paper explores the issues surrounding knowledge management (KM) implementations, having particular focus on the integration of human factors into the practice of KM. The hypothesis is that KM fails to deliver its full potential to businesses because of an excessive reliance on technical information tools and little recognition for the human factors behind the process. A set of proposals is suggested to improve the proactive and implementation of KM based on a literature review of the common critics.

Keywords: Knowledge Management, Human Factors, Information management, Organizational Learning.

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1 Introduction

There is one thing that is stronger than all the armies in the world, and that is an idea whose time has come. An invasion of armies can be resisted, but not an idea whose time has come. ~ Victor Hugo

Knowledge Management (KM), ultimately, is about doing the most with the knowledge and concepts available inside and outside the organization. The new information technology resources brought massively to companies since the 80's, and now an ubiquitous part of our daily work and life, promised a new era where all the data, information, knowledge and ideas inside an organization, would be easily discovered and quickly capitalised.

This dream of effectively connecting people, ideas and knowledge on a real time basis, using every resource available, has crashed with the reality of information systems great to store and deliver data, but poor to understand and filter it. The reality is that the real problem was never to capture and store every bit of explicit knowledge but actually make sense of it, build over it and ultimately socialize the organizational knowledge therefore putting the human factors, **the people**, in the middle of this equation. (Dale, 2005)

Unless knowledge management is implemented, with the understanding that information tools are only a small part of the puzzle, failure is guaranteed. Some critical issues that have arisen from successful KM business cases are the importance of communities of practice, the organizational learning process, multidisciplinary collaboration, information openness, specific cultural considerations and knowledge sharing and socialization. All of those topics have strong ties with human factors.

To cover these problems, firstly knowledge management as a discipline will be introduced to enable us to understand its evolution and scope. Secondly, the common critics to KM will be exposed. Thirdly how to introduce human factors as a main consideration for the implementation of KM will be explored thus responding to some of its critics. Finally, conclusions and reflections around this topic will be provided.

2 The Discipline of Knowledge Management

Knowledge is not simply another commodity. On the contrary. Knowledge is never used up. It increases by diffusion and grows by dispersion. ~ Daniel J. Boorstin

As an established discipline, knowledge management only emerged in 1991 as a result of a Harvard Business Review paper written by Ikujiro Nonaka. There, Nonaka stressed the importance of a broad understanding of organizational knowledge and the different strategies available to make the best use of the intellectual assets, both explicit and implicit, inside organizations. This first systematic and more holistic approach to knowledge management, made the theoretical differentiation between information management, which was usually related to information tools, and knowledge management, which was an upper layer concerned with the tools and also the “soft” factors defining the transformation of information into knowledge possible.

In spite of this clear start, unfortunately, for many knowledge management practitioners a more mechanistic approach to KM is more appealing than the integral one. For them, it is easier (and sometimes more profitable) to handle implementations of KM based purely in IT tools because it is easier to sell them inside the organization as an easy, quick and almost magical solution for its problems. This of course does not require continuous support and is only dependant on the quality of the infrastructure and the systems in place, so it has been seen as an attractive way of gaining (buying) competitive advantages.

These simplistic implementations of KM have forgotten the wider definition that understands knowledge management as the sum of all activities that enable the creation, storage, distribution, and application of knowledge in organizations. This knowledge can be either tacit (which resides in the minds of personnel) or explicit (which can be captured in some physical and communicable form) (Desouza, 2004), creating a particular challenge for IT tools when the need is to manage and use implicit knowledge that has no codifiable expression yet and thus cannot be captured by the systems.

This disconnection between theory and practice, has led to an amount of critics, qualifying knowledge management as an oxymoron, because for some, it is not possible to actively manage the ethereal and dynamic knowledge without constraining and limiting its power.

Therefore the final result is just a good system for data and information management instead.

3 Common Critics to Knowledge Management

You can't manage knowledge. Knowledge is between two ears and only between two ears.
~ Peter Drucker

As introduced before the young discipline of knowledge management is not exempt of critics. Some of the most important objections are around the management of the implicit (also known as tacit) organizational and personal knowledge. This type of knowledge is the one internalized by practice, trial and error and the one that forges a set of vital skills that allows us to react almost automatically to changes in our environment; taking rapid decisions to solve problems. Unfortunately, the systematic and almost scientific approach that KM has used when it comes to deal with explicit and coded knowledge has several limitations and cannot be extrapolated easily from tacit knowledge. This provides the space for critics to argue that this area is more an art than a science and it shouldn't be considered a proper discipline as such. (KM Magazine, 2003)

Ironically, knowledge management itself emerged as a response to critics against the discipline of information management, which was attacked for its lack of consideration of "softer" and more holistic elements, able to make an effective use of information and transform it into organizational knowledge; which ultimately is the value behind any piece of information. From this perspective, it is easier to understand the struggles and difficulties that KM has had during the journey of complementing its purely informational and technological background with cultural, psychological and sociological considerations that come from completely opposite disciplines and are based heavily on human factors.

Judging by common critics, it seems clear that some of the biggest weakness of KM are directly related with its ability to handle human factors effectively, which is exactly the reason for the creation of KM in the first place. This can be interpreted as an urgent call to establish more multidisciplinary links with the social sciences, to nurture the discipline, respond to the critics and deliver its original value proposition. Unfortunately, studies employing citation analysis (Jashapara, 2005) show that under the keyword "Knowledge Management" there is little cross-disciplinary citation. This means that at least in the

academic world, this discipline has been treated as a “functional silo” bringing little attention of valuable social sciences like education, sociology and psychology and vice versa, citing scarce material out of the knowledge management and information management domain.

4 Incorporating Human Factors into the KM Practice

The best way to compile inaccurate information that no one wants is to make it up.
~ Scott Adams

As explained before, there is a risk in focusing too much on information, and too little on the whole picture which is supposed to be in the scope of a knowledge manager practitioner. To better understand the critical elements behind KM, figure 1 illustrates the four main areas which the literature has identified as critical elements to a successful KM strategy. (Jashapara, 2005).

For the purposes of human factors and defining them as the science of understanding the properties of human capabilities, specifically the cognitive properties of an individual or social behaviour (Wickens, 1997), only in “system and technology” the role of human factors is minor. Below the influences of human factors in each of the other areas is explained.

- **Strategy:**

Decision makers are not 100% purely rational beings and they are heavily affected by the overflow of information and the way this information is presented. Human factors can help to take better strategic decisions providing a better understanding of the cognitive capabilities related with the retention and ability to assess big amounts of information. Some outputs can be better guidelines about how much detail should be provided in each information piece as well as the most attractive and intuitive ways of displaying this information to give a better chance to be transformed into knowledge.

- **Culture:**

The set of organizational beliefs and expected behaviours is intrinsically bonded with human nature and its process. If KM is to be implemented effectively we cannot

forget that it must be embedded and customized to the specific cultural aspects of the organization.

- **Organizational learning:**

The knowledge is a dynamic entity in permanent flow and change. Learning is the process by which information is internalized in individual tacit knowledge, and as such is the key piece for maintaining the knowledge cycle and ensuring the long-term sustainability of the company. Organizational learning implies that the knowledge resides in the company as well as in the individual and requires close attention to the interactions between the individual human factors and the organizational structure. This has far reaching effects ranging from the ideal form of the organizational chart (functional or project based for example) to internal policies in regards of information openness and interdepartmental projects.

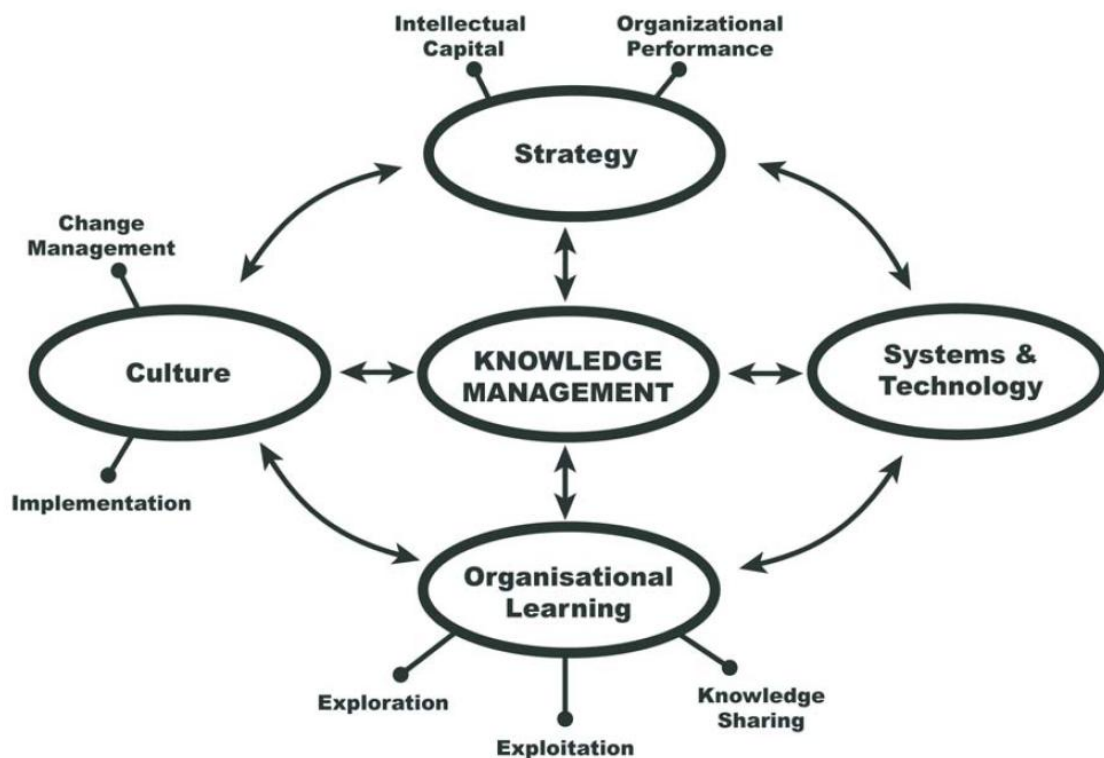


Figure 1. An integrative Framework of Knowledge Management. (Jashapara, 2005)

4.1 The Role of the Social Tools

Socializing information is particularly relevant for the organizational learning area and fortunately new and more people centred tools are becoming available but also better

understood. Among others, tools like social networking sites, groupware, wikis, blogs, forums, RSS and collaborative project management tools make this activity easier and more affordable than ever. Nevertheless, this set of online tools and strategies must be complemented with a powerful set of “offline” activities such as communities of practice, conferences and the incentive of cross functional groups of work. In this way and as shown in figure 2, it will be possible to transform and build new knowledge for the benefit of the entire organization.

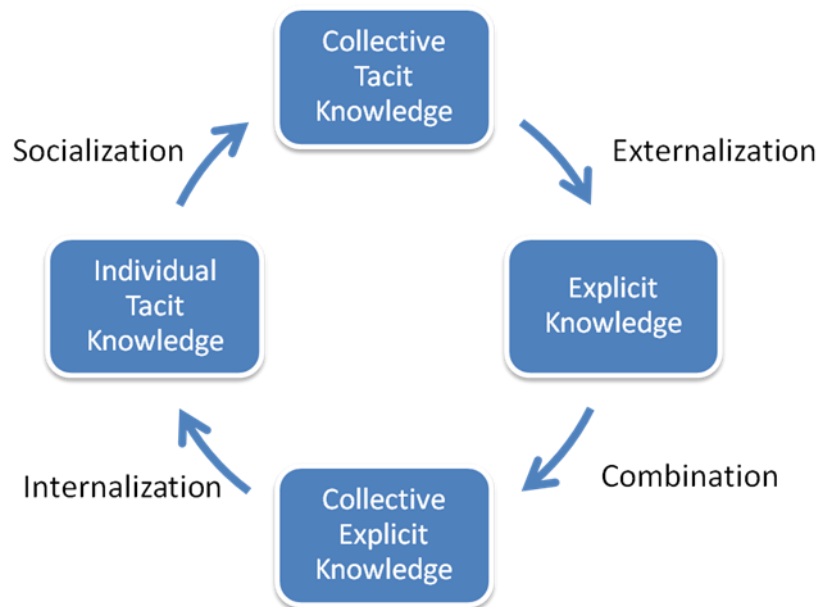


Figure 2. The Knowledge Cycle. Original. (Based on Nonaka 1991)

4.2 Managing Knowledge versus Managing Information or Data

The most important aspect of KM to bear in mind, is the clear distinction that always must be done between the different layers that KM is supposed to manage. The big gap and confusion is usually between information and knowledge because this is where the frontier versus the technical and the human domain resides. By incorporating the human factors theory, knowledge management can make an easier transition, establish better connections and make

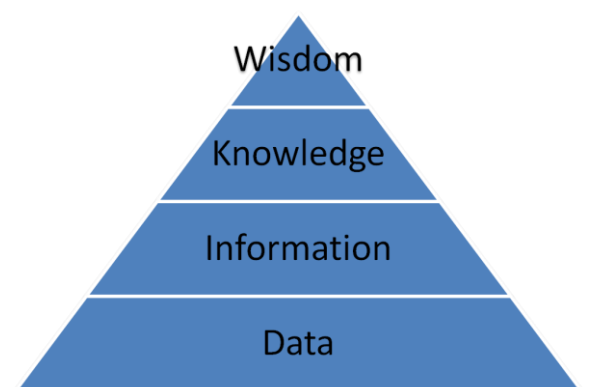


Figure 3, The different entities of study. Original. (Based on Nonaka, 1991)

clearer distinctions between these important layers thus helping to create a more robust discipline.

5 Conclusions

KM requires a greater and more effective exploration of others discipline resources, in particular when it comes to human factors. It must acknowledge that there is no easy shortcut to deal with the challenges of managing the organizational knowledge, while understanding that powerful new information technology tools might be critical to the advancement of the profession.

In some ways, it can be argued that KM requires two coordinated “souls” working in parallel; one analytical and highly rational, with cutting edge expertise in information technology and the other more intuitive and connected with “softer” factors related with the human experience and its natural interactions with its environment. This is a big challenge in a world defined by functional silos and highly specialized areas but is the only way around the problem of going from information management to true knowledge management.

In the future of this discipline there is a glimpse of hope around a new exciting set of semantic technologies which promises to revolutionize the information landscape; allowing computers to “understand” raw data and filter for us only the relevant knowledge, avoiding the information overflow that we get used to (Davies, 2009). This excitement has been seen several times before, especially in the information management field, when new technologies come into place. We should be cautious, and understand beforehand the real implications, scope and possibilities of these new technologies, otherwise the discipline easily might blind itself once again, relying too much on the technologies and forgetting the users.

In any case, in the so called “knowledge economy”, what is sure is that KM has an special place and role reserved and is up to the discipline to fulfil the expectations or fade away like a broken promise.

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