Knowledge Management & Electronic Human Resource Management

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Abstract

Knowledge management often encompasses identifying and mapping intellectual assets within the organization, generating new knowledge for competitive advantage within the organization, making vast amounts of corporate information accessible, sharing of best practices, and technology that enables all of the above - including groupware and intranets. Globally, knowledge has become the most important factor in economic development and knowledge assets are considered essential for economic growth, competitive advantage, human development and quality of human life. Knowledge management presents HRM with the opportunity to become pivotal to the strategic management of the organization and a catalyst for knowledge creation and building value. This involves more than just re-labeling Human Resources - it is a fundamental paradigmatic shift for HRM and senior management. Thus this paper is to promote the ideas of applying Knowledge Management to EHRM solutions. It is to provide business organizations with pragmatic understanding about integrating knowledge management strategy and technologies in Human Resource Management for successful performance.

Introduction

The importance of 'knowledge' for the economy and business has been discussed since at least 1945, if only sporadically, and received growing attention from the 1960s. The idea that knowledge could and should be managed, however, seems not to have been seriously considered until a decade or so later. Knowledge management is a business activity with two primary aspects[1 and 2]:

● Treating the knowledge component of business activities as an explicit concern of business reflected in strategy, policy, and practice at all levels of the organization.

● Making a direct connection between an organization's intellectual assets - both explicit [recorded] and tacit [personal know-how] - and positive business results.

In practice, knowledge management often encompasses identifying and mapping intellectual assets within the organization, generating new knowledge for competitive advantage within the organization, making vast amounts of corporate information accessible, sharing of best practices, and technology that enables all of the above - including groupware and intranets [3] which is shown in figure 1. Knowledge management shares with education and artificial intelligence the need

Figure 1

for a practical working definition or conceptualization of 'knowledge'.

Yet if managers are not clear about what they are trying to manage, we cannot evaluate knowledge management practices, understand the effects of actions taken in the name of knowledge management, assess the relationship of knowledge management to other management activities, or evaluate the claim that knowledge management is just another fad of consultants and academics. Equating knowledge with information does not get us very far. Nothing is said in these accounts about how 'processing' or 'combination' transforms 'information' into 'knowledge', or how information acquires 'meaning' or becomes 'constituted' as a belief.

Need for Knowledge Management:
Why do we need to manage knowledge? Ann Macintosh of the Artificial Intelligence Applications Institute has identified [4] some of the specific business factors, including:
- Marketplaces are increasingly competitive and the rate of innovation is rising.
- Reductions in staffing create a need to replace informal knowledge with formal methods.
- Competitive pressures reduce the size of the work force that holds valuable business knowledge.
- The amount of time available to experience and acquire knowledge has diminished.
- Early retirements and increasing mobility of the work force lead to loss of knowledge.
- There is a need to manage increasing complexity as small operating companies are trans-national sourcing operations.
- Changes in strategic direction may result in the loss of knowledge in a specific area.

In brief, knowledge and information have become the medium in which business problems occur[5]. As a result, managing knowledge represents the primary opportunity for achieving substantial savings, significant improvements in human performance, and competitive advantage. It's not just a Fortune 500 business problem. Small companies need formal approaches to knowledge management even more, because they don't have the market leverage, inertia, and resources that big companies do. They have to be much more flexible, more responsive, and more "right" (make better decisions) - because even small mistakes can be fatal to them[6].

Literature Review:

The key background study was done in the field of past research on knowledge management as well as features of e-HRM.

Approaches to Knowledge Management:

The term "knowledge management" is now in widespread use, having appeared in the titles of many new books about knowledge management as a business strategy, as well as in articles in many business publications, including The Wall Street Journal. There are, of course, many ways to slice up the multi-faceted world of knowledge management.
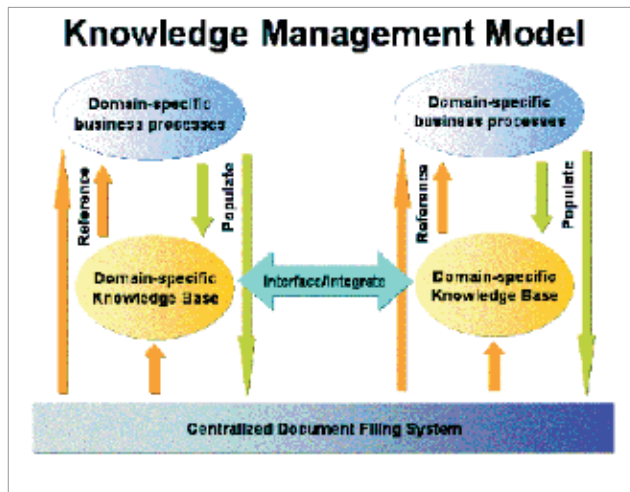

Figure – 2, Model of Knowledge Management

In this model, the KM system is intended to provide infrastructure support for knowledge intensive processes of the organization shown in figure -2. The emphasis here is on knowledge performance and getting results rather than the more traditional emphasis on contents management, knowledge sharing or information access.

Mechanistic approaches to knowledge management

Mechanistic approaches to knowledge management [6] are characterized by the application of technology and resources to do more of the same better. The main assumptions of the mechanistic approach include:

- Better accessibility to information is a key, including enhanced methods of access and reuse of documents (hypertext linking, databases, full-text search, etc.)
- Networking technology in general (especially intranets), and groupware in particular, will be key solutions.
- In general, technology and sheer volume of information will make it work.
  Cultural / behavioristic approaches to knowledge management [7]

Cultural/behavioristic approaches, with substantial roots in process re-engineering and change management, tend to view the "knowledge problem" as a management issue. Technology though ultimately essential for managing explicit knowledge resources - is not the solution. These approaches tend to focus more on innovation and creativity (the "learning organization") than on leveraging existing explicit resources or making working knowledge explicit[8]. Assumptions of cultural/behavioristic approaches often include:

● Organizational behaviors and culture need to be changed ... dramatically. In our information-intensive environments, organizations become dysfunctional relative to business objectives.

● Organizational behaviors and culture can be changed, but traditional technology and methods of attempting to solve the "knowledge problem" have reached their limits of effectiveness. A "holistic" view is required.[8] Theories of behavior of large-scale systems are often invoked.

● It's the processes that matter, not the technology.

● Nothing happens or changes unless a manager makes it happen.

Systematic approaches to knowledge management[9]

Systematic approaches to knowledge management retain the traditional faith in rational analysis of the knowledge problem: the problem can be solved, but new thinking of many kinds is required. Some basic assumptions:

● It's sustainable results that matter, not the processes or technology ... or your definition of "knowledge."

● A resource cannot be managed unless it is modeled, and many aspects of the organization's knowledge can be modeled as an explicit resource.

● Solutions can be found in a variety of disciplines and technologies, and traditional methods of analysis can be used to re-examine the nature of knowledge work and to solve the knowledge problem.

● Cultural issues are important, but they too must be evaluated systematically. Employees may or may not have to be "changed," but policies and work practices must certainly be changed, and technology can be applied successfully to business knowledge problems themselves.

● Knowledge management has an important management component, but it is not an activity or discipline that belongs exclusively to managers.

Business Activities related to Knowledge Management

● Management of Information Systems (MIS) or Information Technology and Information Management (IT/IM) - Knowledge management emerged in part out of IT management as it became clear that access to information and data was insufficient to provide enough insight to support decision-making. Recently, major software companies (e.g., Microsoft) have also decided to offer KM services to help integrate technology into the workplace.

● Human Resource Management - It is said that the 1980s fixation with "business process re-engineering" had emphasized cost-cutting without appreciating the value of people[10]. It became clear that people were not costs, they were in fact assets because of their knowledge and experience. Within human resource management circles, knowledge management grew as a way of demonstrating,

in a more systematic way, the value of people to business processes[11].

● Change Management - As regular or continuous change became a feature of organizational life, it was recognized that successful change needed to be managed. Since organizational change tends to involve the orchestration of people, technology and resources, knowledge management was considered a key method of tying these threads together[12].

● Project and Team Management - As organizations began to rely on short-term projects, serial short-term contracts, and use of teams, it became necessary to provide appropriate support - and capture the resulting knowledge.

Corporate Intelligence and Research & Development - In an organization there are also several areas specifically devoted to acquiring and creating useful knowledge, such as technology research centres, intelligence gathering operations, corporate research and training facilities, and libraries[13 and 14].

Knowledge Management in the Technological Era:

The traditional paradigm of information systems is based on seeking a consensual interpretation of information based on socially dictated norms or the mandate of the company bosses[15]. This has resulted in the confusion between 'knowledge' and 'information'. However, knowledge and information are distinct entities![16] While information generated by the computer systems is not a very rich carrier of human interpretation for potential action, 'knowledge' resides in the user's subjective context of action based on that information[17 and 18]. Hence, it may not be incorrect to state that knowledge resides in the user and not in the collection of

information, a point made two decades ago by West Churchman, the leading thinker on information systems[19].

Karl Erik Sveiby, the author of The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets, contends that the confusion between `knowledge' and `information' has caused managers to sink billions of dollars in technology ventures that have yielded marginal results. He asserts that the business managers need to realize that unlike information, knowledge is embedded in people... and knowledge creation occurs in the process of social interaction[20]. On a similar note, Ikujiro Nonaka, the renowned Professor of Knowledge, has emphasized that only human beings can take the central role in knowledge creation. He argues that computers are merely tools, however great their information-processing capabilities may be[21]. A very recent Harvard Business Review special issue on Knowledge Management seems to lend credence to this point of view. This issue highlighted the need for constructive conflict in organizations that aspire to be leaders in innovation and creation of new knowledge.

The 'wicked environment' of the new world of business imposes the need for variety and complexity of interpretations of information outputs generated by computer systems. Such variety is necessary for deciphering the multiple world views of the uncertain and unpredictable future. As underscored by the strategy guru Gary Hamel at the recent Academy of Management meeting address, non-linear change imposes upon organizations the need for devising non-linear strategies. Such strategies cannot be 'predicted' based on a static picture of information residing in the company's databases. Rather, such strategies will depend

upon developing interpretive flexibility by understanding multiple views of the future. In this perspective, the objective of business strategy is not to indulge in long-term planning of the future. Rather, the emphasis is on understanding the various world views of future using techniques such as scenario-planning.

Knowledge management draws from a wide range of disciplines and technologies. Expert systems, artificial intelligence and knowledge base management systems (KBMS) related technologies have acquired an undeserved reputation of having failed to meet their own - and the marketplace's - high expectations. In fact, these technologies continue to be applied widely, and the lessons practitioners have learned are directly applicable to knowledge management. Computer-supported collaborative work (groupware) in Europe, knowledge management is almost synonymous with groupware ... and therefore with Lotus Notes. Sharing and collaboration are clearly vital to organizational knowledge management - with or without supporting technology.

HRM in the Knowledge Economy

The nature and characteristics of work in the knowledge economy herald new opportunities for HRM. To maximize benefit from knowledge assets, a fourfold contribution from HRM is proposed. In the knowledge economy, HRM must Provide expertise in understanding and defining firm-level strategic knowledge capabilities. And it develops and manages knowledge workers by leveraging the knowing-learning-doing nexus. Also build knowledge value as an organizational as well as an individual asset; and Minimize the organization's knowledge risk associated with loss of requisite capability and knowledge.

Knowledge creation, use, sharing and retention have always been important. What is new is the significant shift towards a systematic and strategic approach to managing the primary assets of the knowledge economy: people, knowledge processes, and knowledge products. Globally, knowledge has become the most important factor in economic development and knowledge assets are considered essential for economic growth, competitive advantage, human development and quality of human life. The idea that people and the knowledge they possess is the organization's most valuable asset is not new. The shift in the terminology from over 20 years ago from 'Personnel Management' to 'Human Resources Management' signaled what some claimed was a metamorphosis for the profession.

Today, the central role of individual and organizational capabilities is significantly amplified with the advent of the knowledge economy. Commanding a central role in realizing value from knowledge assets is proposed as the new strategic role for HRM. What is the nature of the transition proposed for HRM? How does this translate to the functional areas of HRM? Table 1 presents a summary of the traditional approaches to HRM and the shift required in the knowledge economy. The areas represent the elements of HRM that offer the greatest opportunity to acquire, build and retain organizational capability.
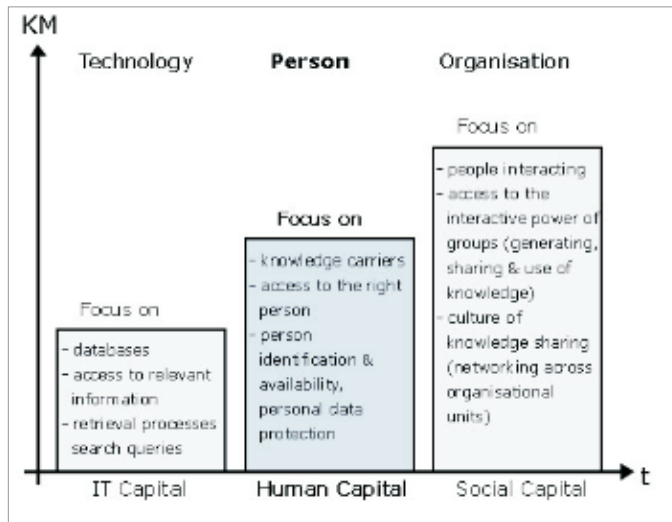
Figure 3

Knowledge management presents HRM with the opportunity to become pivotal to the strategic management of the organization and a catalyst for knowledge creation and building value. This involves more than just relabeling Human Resources - it is a fundamental paradigmatic shift for HRM and senior management. The transformation begins with viewing HRM through a 'knowledge lens' and repositioning the functions in relation to strategic knowledge capabilities. Managing knowledge workers, building value from knowledge, and assessing knowledge risk are also new requirements of HRM in the knowledge economy. We propose that HRM must respond to the key challenges presented by the knowledge economy and command a central position in realizing value from knowledge assets as a strategic role for HRM.

Knowledge Management & e-HRM:
In the course of prevailing trends like globalization, customer orientation and specialization, most of the companies place emphasis on recruitment, sustainment and evolution of qualified employees. The companies are aware of the fact that human resources have changed more and more from a cost factor to success factor.

Electronic Human Resource Management (eHRM) is a web based tool to automate and support HR process. The implementation of eHRM is n opportunity to delegate the data entry to the employees. eHRM facilitates the usage of HR marketplaces and offers more self service to the employees. eHRM is a collection of many different technologies. At first the growing attention of companies on the factor knowledge is mainly driven by the evolution of information technology. Information systems like eHRM solutions -that network information enable companies to get a consistent concept for their knowledge management. In this sense Knowledge Management is always a collection of different techniques. A variety of these techniques is used in companies to acquire knowledge, to organize knowledge and to make knowledge transparent. One of these mentioned techniques is knowledge Discovery in Databases (KDD) respective Data Mining as a step of the KDD-process.

eHRM offers the opportunity to automate administrative HR-work and to optimize value creating HR-activities. Three levels of development can be distinguished:

1. Web-presence HR,
2. Web-enabled HR, and
3. Web-energized HR.

Fig. 4. From 'Old World' to E-World of Business: Knowledge Management for 'Paradigm Shifts'
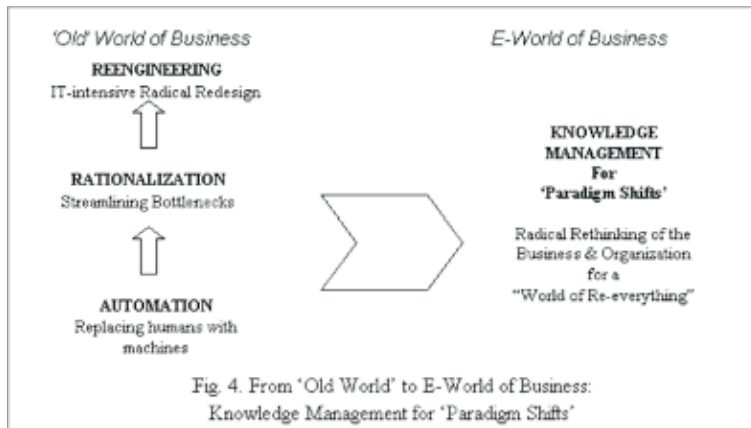
The first level means that parts of the eHRM-solution are present. Web-enabled means that all parts of the eHRM-solution are present and can be accessed online. The third level describes the eHRM-solution that is fully implemented, can be accessed online and is used intensively by the employees. The desired level and the pace of implementation for HR-solutions are specific for each company. At DaimlerChrysler AG, Plant Worth the eHRM-solution is on level two at the moment and is to reach level three where it is intensively used by the HR-workers and the employees.

As weak definition eHRM shall be known in the following as an integrated optimization of HR-prices consequently using web-based technology for all facets of HR-work. Amongst other facets e-learning in the field of continuing education, employee-self-service (ESS) in the field of HR-administration and the utilization of the intra and extranet in the field of recruitment belong to the main fields of eHRM that are supported by the eHRM system.

The main benefits of eHRM are an increase of quality and pace, because the existing administrative processes were slow and inefficient conditional upon mainly paper based processes, e.g. the tendency of standing data and the payroll. The direct access of the network enabled employee avoids double entries for example at the tendency of standing data, travel expense accounting and applications for leave. With e-recruitment the company gets an additional possibility besides the normal application by paper to recruit people over the web in an online application process.

It is common for large companies to install eHRM. Not only can the processing time be shortened but also manpower can be saved. So far eHRM reaches the prime objective of cost effectiveness. Besides the positive aspects of eHRM there are different negative impacts. The traditional social

task of the HR department suffers under the increasing aril distance that eHRM causes with its virtual online processes. The partial loss of face to face communication is rated negative by the employees. Finally the HR worker is affected by the changes in the HR processes. The ongoing automation of formerly time consuming tasks leads to long term staff cuts in the HR department. Thus the HR worker is central component of the implementation of eHRM because he is the key factor to realize the newly installed processes. With a demotivated HR worker due to the anxiety to loose his own job an implementation of eHRM is futile. A main task must therefore be the reorientation of the HR workers to a new scope of duties, especially in the area of strategic Human Resource Management that is recruitment, personnel evolution and continuing education.

Conclusion:

Knowledge management has emerged as a growing field of practice and research in response to the recognition that knowledge is a potent force in the economy, and for competitive advantage. The concept of knowledge itself, however, remains vague and unsatisfactory, a situation that may well hinder the development of knowledge management theory and practice. Knowledge itself cannot be managed, only the conditions of its use-in-action, which necessarily centers on people. Knowledge management practice, if it is to remain distinct from information management, which also focused on knowledge representations, must give pride of place to the management of people.

Knowledge Management (KM) is typically defined to be the holistic combination of measures for managing people, processes, and technology, the explicit integration of Human Resource Management into KM initiatives is seldom examined. In the course of prevailing trends like globalization, customer orientation and specialization, most of the companies place emphasis on recruitment, sustainment and evolution of qualified employees. Electronic Human Resource Management (eHRM) is a web based tool to automate and support HR process. The implementation of eHRM is an opportunity to delegate the data entry to the employees. eHRM facilitates the usage of HR marketplaces and offers more self service to the employees.

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