



Knowledge Management

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To Link this Article: <http://dx.doi.org/10.6007/IJARPED/v2-i4/489>

DOI:10.6007/IJARPED/v2-i4/489

Published Online: 29 September 2013

Abstract

Complexity, rapid development and diversity are among essential qualities of an organization. Therefore, organization would achieve success in present-day world if they can go through and complete the process of acquiring, possessing and advancing knowledge.

Knowledge management is the process of finding methodical, selecting, organizing and applying knowledge.

Despite the importance of the process, it seems that organizations are not effectively making use of it. In this article we try to mention some of the functions and results of providing knowledge management; we also try to encourage managers to take advantage of that process in their establishments.

Keywords: Knowledge, Knowledge Management, The Process of Knowledge Management, Generations of Knowledge Management

Introduction

Today, all organizations need acquiring, enhancing, possessing and applying knowledge as a determining factor in growth and development (Aujirapongpan et al., 2010).

Due to an increased amount of information and a necessity to apply knowledge effectively, a new phenomenon called knowledge management has emerged in the last two decades (Piri & Assefzadeh, 2006). In modern world, organizations know they would not survive unless they adopt a special approach to management, placing a high value on their organizational knowledge.

For that reason, approaches and cycles have been outlined in order to perform knowledge management. Because of the big changes that have occurred worldwide, now managers' and management theoreticians' attention has been attracted toward the intellectual assets of organizations more than ever

In the contemporary period of history, known as Knowledge Age, when scholars and knowledge-based organizations are the foundations of sustainable development in societies, knowledge management takes on a major importance. Today, wisdom, the application of

knowledge and the development of new solutions for dealing with human needs, has assumed a prominent role in the world and knowledge has been turned into the solid foundation of growth (Alvani, 2010).

Considering what is mentioned above, the present research seeks to identify and prioritize the factors that affect knowledge management. In line with this objective, we will describe knowledge, knowledge management, knowledge management processes and advantages of using knowledge management.

A Brief History of Knowledge Management

Tracking the history of knowledge management proves that it's been an old goal people have strived for since long ago. Knowledge as "knowing and the reason for knowing" probably arose thousands of years ago, thanks to western philosophers. Maybe eastern philosophers had the same amount of influence on the development of knowledge, although they placed much emphasis on spiritual guidance and religious life (WiiG, 1999). Some researchers go beyond that perception and believe that primitive man's attempts to survive and to understand the relationships that existed between phenomena ought to be considered as examples of searching for knowledge.

The necessity for measuring the value of intellectual assets was first stressed a few decades ago. Peters introduced knowledge as the source of competition in 1959. The Pollati explained knowledge and the need for acquiring it in 1960s (Rodding, 2004, p.36). Peter Draker was among the first scholars who called people's attention to the value of intellectual asset. He wrote in his book, *Post-capitalist Society*, that "capital, natural resources and labor force are not the most important economic resources, i.e. production tools. But knowledge is and will be that fundamental economic resource (Danport & Prosak, 2000).

Knowledge as an organizational resource and gaining knowledge as a vital factor in survival and organizational competition received considerable attention in 1990s. Skandia, a Swedish company and a pioneer in financial services, first introduced the concept of knowledge management in its 1994 annual report. The report consisted of a series of financial analyses conducted to show the value of intellectual assets—knowledge wealth—of a company. To do so, major effort had been launched since 1991. The result was that intellectual assets is, at least, as important as traditional financial assets to sustainable revenue generation (Baghi & Fereshteh, 2002)

The focus of knowledge is on economic effectiveness. This highlights the role of human being in knowledge management because reaching a level of effective behavior is essential to intense competition. It obliges us to realize the value of everybody in an organization. To do so, we have to create balance among recognition, motivation, self-satisfaction, the feeling of security and many other elements.

In contemporary knowledge management the emphasis is placed on the ability to think and analyze issues; rational duties gain prominence rather than manual labor. Here, workers must enjoy freedom of thinking, so they would express their views on their job.

Definition of Knowledge

Knowledge, according to Oxford Dictionary, is the "awareness or familiarity gained by experience of a fact or situation". Davenport and Prusak add a framework to that definition: knowledge is an unstable combination of experiences, values, background information and experts' insights that present us with a framework to evaluation and incorporation of new experiences and information. (Davenport & Prusak, 1998) Data is the basis of knowledge. It

includes raw facts and figures—a fact taken out of a situation or an item of a certain background, without any connection with other items and facts. Data is outlined in a certain background to make information.

New knowledge is formed out of the combination of personal knowledge and others' knowledge. Knowledge has an individual nature because it interacts with someone's values and beliefs and their understanding of the world and of other people. In addition, knowledge emerges out of the understanding and background of interpersonal relationships. It's worth mentioning that knowledge is more substantial and meaningful than information.

Knowledge is a political combination of experiences, values, accessible information and organized perceptions which represent a framework for evaluating and using new experiences. Knowledge is emerged and applied in a scholar's mind. In an organization, knowledge is reflected not only in documents, but also in organizational procedures, processes, actions and norms.

Transformation of data into information and then into knowledge is the basis of knowledge management

Types of Knowledge

Research demonstrates that 20 percent of knowledge is explicit and the remaining 80 percent is tacit or hidden.

Explicit Knowledge

Explicit knowledge is evident enough to be understood. It is capable of being encoded. The code, of course, might be written, oral, behavioral, etc. Books, articles, speeches, classified organizational procedures and other documents are examples of this type of knowledge. One would consider this type of knowledge as flowing.

Tacit Knowledge

This type of knowledge is not clear enough for these reasons:

- 1- We possess the ability to explain and define the knowledge, but it is not presented and defined yet.
- 2- We possess the ability to explain and define the knowledge, yet there is no determination to do so.
- 3- We do not possess the ability to explain knowledge.

This knowledge is usually hidden in people's minds and behind organizational procedures and cultural treasures of societies. Although managing tacit knowledge is by far more difficult than explicit knowledge, it is more useful in gaining competitive advantage.



Definition of Knowledge Management

Because of the rapid change in IT and internet, traditional patterns of business must adapt to modern environment in order to survive. And modern organizations have to effectively search

for knowledge resources in order to keep their competitive advantage in a global economy (Goodarzi, 2009). This universality and competitiveness made knowledge the most valuable strategic resource; therefore, organizations' ability to apply knowledge for solving problems and taking advantage of opportunities is considered to be its most important ability (Adli, 2005).

Both scientific and business communities believe that knowledge-based organizations can keep their long-term competitive advantage. That's why knowledge management has turned into a vital issue in recent years (Bahatt, 2001). Scholars believe 4 factors had influence in the development of knowledge management:

- 1 – Transition of the age of capital asset domination due to the advent of intellectual assets.
- 2 – Dramatic increase in the amount of information, its digitalization and mass-access to it.
- 3 – The change in age pyramid and the probability of losing organizational knowledge because of staff retirements.
- 4 – Specialization of skills (Piri & Assefzadeh, 2006).

Knowledge management is a modern attempt in the contemporary period of history, known as Knowledge Age, in order to purposefully keep, manage and increase organizational knowledge. Knowledge management is based on the premise that investment in science produces maximum and most substantial benefit.

The most precise definition of knowledge management is proposed by Kartner: knowledge management is the science that encourages bilateral support in order to obtain, retain, organize and make use of information".

Knowledge management is a process that helps organizations obtain, select, sort out and release information.

Knowledge management is the process of absorbing and getting information by specialists and professionals in organizations. The result is that they get credit and provide the management with knowledge in lieu of something appropriate. Knowledge management is a specialty that is needed for solving problems, learning dynamically and making decisions (Daneshfard & Shahabinia, 2009).

Charles Armstrong: knowledge management is the process of emphasizing dynamic nature of an organization in order to increase the ability of attracting customers. To reach that goal, we've got to make proper place, time and situation in which intellectual strategies and measures are encouraged.

Principles of Knowledge Management

The mentioned definitions and concepts are somewhat the cornerstone of the principles of knowledge management. However, Davenport and Prusak (1988) explain the principles as follows:

- 1 – Knowledge originates from people's minds and is in their minds.
- 2 – Sharing knowledge requires trust.
- 3 – Technology makes new knowledge-based behaviors possible.
- 4 – Sharing knowledge ought to be encouraged and prized.
- 5 – Support by managers and by resources is necessary.
- 6 – Knowledge is created and encouraging the creation of knowledge results in its development in an impressive fashion.

Advantages of Knowledge Management

Four main reasons are presented for the centrality of knowledge in the modern knowledge-based economy:

1. The substantial and increasing volume of the commodities whose production is based on knowledge and their profitability mostly depends on the knowledge applied in them and not in the way, they are distributed.
2. Knowledge naturally inclines to be divided into various branches and its quick and effective reproduction equals with the main source of competitive advantage.
3. Estimating the value of investment in knowledge is a difficult task since its result could be hopelessness as well as progress and high profit.
4. Even when the investment in knowledge leads to a considerable economic profit, the degree of the effect of knowledge in this process cannot be determined. In the knowledge-based economies, the competitive advantage of organizations is defined as the relative superiority over counterparts in that field. This is attainable only through creation, retaining and management of knowledge.

The practitioners in the area of knowledge management have stated six advantages for it (Rodding, 2004, p.102):

1. Efficacy and economy
2. Modification and renovation
3. Speed of Process
4. New opportunities
5. Better application of human resources
6. Duration

The Process of Knowledge Management

Knowledge management is a process, which helps the individuals and organizations to acquire, select, organize and publish critical information, and apply them for solving problems, life-long learning, strategic planning in response to the alternations and adapting to the ever-changing environment of today. In fact, knowledge management focuses on the way of organizing and applying knowledge for the purpose of improving the performance of individuals and organizations (Moradi, 2006).

Knowledge management is an activity for shaping a social and technical environment to create and share knowledge. Knowledge management is a nonlinear, dynamic and cyclic process through which organization staffs constantly deal with information, gain new knowledge and finally use that knowledge to modify their decisions. The purpose of knowledge management is presentation of new strategies, which help the members of an organization to achieve their goals. The main mission of KM is to share all members of an organization or a system in knowledge (Modiri, 2005).

Nowadays every working or scientific group acknowledges that organizations need to work around the center of knowledge and science, if they want to be stable and effectively attend the competitive arena of today. According to Peter Draker, in the 21st century, the secret of success for organizations is the management of knowledge (Moradzadeh, 2006).

Since late 90s, knowledge management has been introduced as a modern way for management; it is, in fact, the evolution of other methods of management, not a newly known subject. Knowledge management is a tool for managing and a process for establishing values derived from the invisible assets of an organization (the human resources).

Successful organizations have found knowledge as their main property and look upon it as a key to the success of their organization.

Although, management of knowledge was at first presented as a commercial concept and applied only in the case of profit organizations, which needed to gain more benefits, KM was utilized for various purposes following the recognition of its role in the success of the organizations, (Mansouri, 2006).

Therefore, it can be concluded that knowledge management is applicable for every organization if it is designed based on the objectives of that organization (Greiner, 2007).

Generally, knowledge management is divided into 4 phases:

1. **Acquiring knowledge:** acquiring knowledge, the first phase of managing the knowledge, emphasizes on the personal knowledge. It includes the activities for accessing, gathering and utilizing knowledge. The experts are eager to obtain knowledge (Birkinshaw & Sheehan, 2002).

Since obtaining knowledge profits the organizations, the staff of an organization must look for a body of knowledge related to their organizational needs. Gaining and collecting knowledge is possible through both internal and external resources. (Hendriks, 2001; Vouros, 2003).

2. **Creating knowledge:** Producing knowledge means creating new knowledge related to the personal motivation, understanding, experience and insight (Tiwana & Mclean, 2005)

Knowledge creation is a result of interaction between tacit knowledge and explicit knowledge. Creation of knowledge can be achieved through various practices like experiments, trainings, seminars, conferences and team works, which all encourage the collaboration and sharing the established knowledge (Coulson & Thomas, 2004).

Furthermore, a flexible organizational structure, appropriate policies, motivational system and technologies can affect the creation of knowledge (Collison & Parcell, 2004).

3. **Retaining Knowledge:** the acquired knowledge requires a systematic process for classification and retaining which is called the "retrieval of knowledge". This knowledge needs to be further modified in order to be useful for the organization.

Another critical point is updating of information. Mere retaining of information cannot meet the needs of the organizations and the information is required to be updated in order to benefit the organization (Hendriks, 2001).

4. **Applying Knowledge:** the last phase of knowledge management is the application of knowledge. This step enables the functionaries and the concerned people to use the established knowledge for effectively solving the problems of an organization. All of the basic elements of knowledge management must be directed toward effective application of individual and organizational knowledge. Since the effectual application of knowledge is the only way for turning knowledge into some observable results, knowledge practically is the most important practice for successful management of knowledge (Bose & Suguramaran, 2003).

The Cycle of Knowledge Management Value

*Data and information..... Acquiring knowledge..... Retaining knowledge.....
Disseminating knowledge..... Applying knowledge.....Feedback*

Generations of Knowledge Management

Historically, knowledge management can be divided into three generations:

1. **First generation:** the period of 1990-1995 is known as the first generation of KM. during these years, practices were made for defining knowledge management, examining its potential advantages for experiences and designing specialized projects of knowledge management.
2. **Second generation:** the second generation appeared in 1996; in this period, many organizations established new organizational positions for managing knowledge such as senior knowledge manager; various sources of knowledge management combined with each other and were immediately applied in the daily organizational discussions. Different definitions of the knowledge related to business philosophy, systems, methods, practices and advanced technologies were existed in this generation. The second generation of KM emphasizes on the point that knowledge management is about the systematic organizational changes where the method of management, system of evaluation, tools and management of the concept, all require a collaborative development.
3. **Third generation:** As a result of modern approaches and methods, the third generation of knowledge management was started off. According to Wiig (2002), one of the differences of this generation with other generations of knowledge management is that the third generation is merged with philosophy of organization, strategy, aims, methods, systems and organizational procedures and it turned KM into a daily activity and an incentive for performing those activities. Paraniaris (2003) believes that the third generation of knowledge management emphasizes on the interconnection between knowing and practicing.

Knowledge is naturally cultural and social and the knowledge of organizations can be apprehended only through changing the practices and organizational methods.

Summing Up

In order to achieve success, it is important to pay attention to the following items:

- 1 – **Connectivity:** Technology, by itself, is not enough for knowledge management to be successful, although it can be an activator and infrastructure for sharing knowledge. Accessibility of knowledge management architect, web-based programs, mobile devices and data working tools to all divisions of an organization is the principal supporter of knowledge management infrastructure. Technology activates knowledge.
- 2 – **Content:** An organization has to conduct an assessment in order to find internal and external point of influence on knowledge. These points of influence are in different forms: customer knowledge, the advent of new media.
- 3 – **Association:** Successful knowledge management requires the association of actions or groups of people in an organization. These people cooperate in different phases of preparation, inauguration, and performance of the mission and achievement of the final result.
- 4 – **Culture:** Senior management's support, agreement, trust and motivation are fundamental parts of knowledge management culture; they require constant attention. In other words, you have to trust what your colleague says and what you provide to your colleagues would be valuable considering their trust in work. The continuation of this cycle leads to knowledge management success.

5 – **Cooperation:** Work processes in knowledge-based organizations are highly dependent on each other. This cooperation is the key to success. Because it can remove obstacles such as cultural differences and guide the staff to achieve a goal.

6 – **Investment:** Investment in knowledge management is an important factor to accelerate the process of utilizing innovations and expansion of staff's knowledge.

So we can say that systematic understanding of and paying attention to the mentioned items would help organizations assess knowledge and implement an effective knowledge management strategy.

Conclusion

In the last two decades, knowledge management has emerged out of an increase in the amount of information in organizations and the need for using the information. In fact, in the contemporary period of history, known as knowledge age, acquiring, advancing, retaining, sharing and applying knowledge are among vital factors in gaining competitive advantage and in surviving. This shows the necessity to plan, organize, lead, supervise and manage the process of accessing factual knowledge in an effective manner. Achieving that goal is possible via competent knowledge management. In the end, let's not forget that if we do not apply knowledge management, not only will we lose the chance of competition, but we will certainly lose our survival chance.

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