

KNOWLEDGE MANAGEMENT AND COMPETITIVE ADVANTAGE FOR ORGANIZATIONS

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Abstract

Knowledge is an important source for learning new things, solving problems, creating core competitiveness and establishes new positions for individual and organization at present and for the future. In previous decades with the advent of the industrial revolution and all the attention focused on industry and mass production and guidelines to its improvement and development, but now have faced another revolution called information and communication technology revolution and is caused changing our attitude. Knowledge management is a process to helps organizations that identify, select, organize and publish important information and skills which are considered as the institutional memory and typically are not organized. This is caused management of organizations for learning problem solving, strategic planning and dynamic decision making as efficient and effective. Knowledge management introduce a completely new management concepts and methods. Knowledge management is to find systematic approach, understand and use knowledge to achieve organizational goals and by reducing the time and cost of testing and error or repeat create value.

Keywords: Knowledge management, competitive advantage

1. Introduction

Our world around is growing as rapid and unthinkable and in this leading world, nations and communities must control quickly understand and their interaction with the world and their science and knowledge adapt with date knowledge; if the community can step forward with the world today, definitely will benefit advantage of this improvements and if they cannot increase their speed certainly will be isolated from other communities and will remain in isolation. Thus researchers and scholars in all fields of science, especially social sciences are trying to apply standards and knowledge management structures because communities achieve to date knowledge that consider a kind of investment strategy and increase intellectual and human assets.

By understanding importance of knowledge proper management, successful organizations attempt to implement knowledge management systems actively. Knowledge of firm can't be hidden from access individuals and users long-term. Companies now know that assets of knowledge staff should be used to the best and this in order to continuity and reassuring competitive advantage is important. Here the question arises that how do organizations create and maintain their competitive advantage? "Boron" and et al believe that the company's ability to dominate the market is subject to organizational knowledge creation as a continuous and comprehensive. As "Peter Drucker" refers, savings of scale, it is not enough. Nowadays knowledge management recognized as a major source of competitive advantage.

2- Differentiation of Knowledge from Data and Information

One of the topics discussed is what shapes the knowledge. It is necessary to clarify of this subject that is expressed the difference between "data" and "information". Unprocessed figures and words is "data". "Data" processed and organized is the information. Application and use of information based on people experience and judgment is named knowledge. Data and information are transferred via information technologies, but knowledge transfer in addition to information technology requires human participation in the development process and modification of knowledge (1). Differentiation of knowledge from data and information allows to knowledge that examine as independent management.

3 - Characteristics of Knowledge

Macdermout believes that acquisition of information about the characteristics of knowledge can help its effective management. He believe that as managers in case of aware of staff properties under the supervision have the more likely to succeed in their office, aware of the characteristics of knowledge will be such same property. In fact, organizations to knowledge management should know what they can handle. Macdermout knows the following features as major features knowledge:

- 1- Knowledge is an act of human and related to human. Because knowledge is created in the minds of people and will be raised and in fact it is the result of human mind.
- 2- Provision and distribution of knowledge will help to its growth. Knowledge is the only known property that it increases when people are involved in it.
- 3- Knowledge is not created immediately. Knowledge is created gradually and it is accumulation. Previous knowledge to form new knowledge is effectively.
- 4- Knowledge is provided to various methods. The proposed method of knowledge is not unique. Knowledge at different times, by different people, in different places, and different methods is provided. To dominate different methods of presenting and creating of the knowledge, greater capacity in an organization to achieve knowledge create new knowledge (2).

4 - Definition of Knowledge Management

Knowledge management is process which through organizations deals with generates a wealth of knowledge and their intellectual capital (3).

As well simple, knowledge management is a process that during the organization deals to create value from intellectual assets and knowledge - oriented. Often, creation of value requires the sharing of knowledge between employee, organizational units, or other organizations; successful managers is always used from available intellectual property in their organizations and have found it. But most of these activities have been done as systematic and structured, so that managers haven't ensured from developing and publishing from achieved knowledge across the organization. It is estimated that 85 percentage knowledge organization assets rather than storage in databases have been replaced in mail, files of word, and presentation files (4).

According to another definition, knowledge management is process or activity by created, acquiring, capturing, sharing and using knowledge, wherever it exists, to enhance learning and performance in organizations (5).

Leading companies for competitive advantage rely heavily on existing knowledge. The important point in knowledge capital is that data is the real and it is important that before knowledge can be accepted and is distributed in organization level, is confirmed by experts, due to organization acquire a large potential competitive advantage.

Projects of knowledge management seek to illustrate the importance of knowledge management, to create organizational culture that can support knowledge management. Knowledge important returns to its organizational philosophy, it means that person performance develops when in their scope of work has knowledge. Important factors of exist philosophy is that all people should have access to knowledge and information and should not be blocked free flow information in organization. Knowledge management causes common understanding in interactions between organization system components, both internal and external. The key factor in this relationship is that decision makers must understand how can use knowledge management to create unity view among the people.

5 - Classification of Knowledge Management Tools

Many attempts have been done to classification of knowledge management tools. Totally can be said that there isn't a unique view in this area and every one experts have done this classification according to their opinion. Knowledge management is a methodology rather than be a technology or product. However, information technology is considered a very important element for the success of knowledge management systems. Knowledge management is facilitated by information technology but information technology is not knowledge management. In fact can be said that main base of the success of knowledge management in organizations is using information technology (6). Knowledge management systems to support multiple types of technology - all of which have rooted in information technology – will be developed.

6 - Knowledge management tools are divided into seven categories:

1- Cooperation: Collaboration tools to help individuals to work together on a task assigned. People may be in a physical location or in different locations and work may be performed simultaneously by individuals or asynchronous.

2- Knowledge mapping: knowledge mapping tools help to capture, visualize and storing unstructured knowledge in the form of standard graphs - not as text -.

3- Data Mining and Knowledge Discovery: The production of knowledge from information is the main target tools for data mining and knowledge discovery.

4- Information retrieval: Information retrieval tools to search and retrieve information within a user's personal computer, a tank and or corporate information WAN and or the Internet may be used.

5 - Online training Systems: Online training systems are training management software systems that combine communications software and online methods of providing educational content.

6- Document Management: Electronic document management systems support organizations to create, manage and distribute information based on documents. These systems reduce the cost of production and distribution of documents and improve access, update and their control.

7- Organizational Memory: The aim of organizational memory tools is supply of suitable information for organizational practices that cannot learn them somewhere except their organizations. Technical terms and specific terms of organization, lessons learned from organization projects and policies and strategies are examples of organizational memory (7).

7 - Organization benefits effect of knowledge management:

Studies conducted in the organizations that knowledge management is foundation of organizational principles have determined most cases utilizing organizations as the following: (according to highest percentage).

1- Acquisition and sharing knowledge. 2 - Training and organizational learning.

3 - Optimal relationship with customers. 4 - Creating competitive advantage.

In fact, effective knowledge management is led to reduction of errors and rework, increases the speed of problem solving and decision making, reduce costs, more delegate authority to members will be caused more effective relationships and better services to customers and human resource managers concerned about people retirement and the shortage of skilled individuals also compensates and also reduces from amount of fraud and administrative corruption.

Given that in these organizations by applying new and modern science and technology minimized direct contact between employees and customers and their communication bridge is usually virtual spaces such as software, Internet, banking systems and mailing networks. also it reduce factors such as psychological and environmental factors, cultural factors, and fatigue caused by traffic among offices and bustle of city and other natural factors that affect people's mental health system in urban life and cause conflicts and collisions and as a result organization efficiency will be increased and will be achieved more organizational goals. More productivity of human capital, more efficient and effective learning of human resources, providing goods and services with more value-added, employee and customer satisfaction are objectives of knowledge management in an organization. Knowledge management in organizations are presented as a process that during organization deals with production of a wealth from their knowledge or intellectual capital and to design appropriate models prevents the waste of national wealth (8).

8 – Life Cycle of knowledge

Mentioned examples show how companies can increase their competitive advantage and benefits through knowledge management. But why should companies implement knowledge management from beginning? Although this question is varied in organization management levels, but the answer is clear. In order to effective and efficient function, knowledge must be managed and accessible.” "In industrial age was said that give the tools to employees to do the job, but now it is said that give knowledge and information to workers to do their job and duty. After the company realized the importance of knowledge management should determine that what elements of knowledge must be managed and how each of them can be implemented. Knowledge has several steps: creation, documentation and storage, transfer and reuse, each of these steps to run have their specific requirements.

First step is creation of knowledge. Through daily activities, knowledge -based staff create and discovery knowledge. Knowledge creation can be related to social status and experience or related to internal and external data that develop through teamwork and partnership. Activities such as work discussions and everyday conversation can create an opportunity to exchange ideas. Also gain experience and testing can provide valuable views and as a result is led to the production of knowledge. With challenge policies and guidelines can be shaped new creative solutions. However, many organizations do not seek such experiences.

Other tool acquiring new knowledge is possession. There are two common viewpoints to possession: one modelling and collaboration between individuals and corporations. Collaboration can be including work among internal teams and Or risky activities among firms. Combination of these two positions creates an opportunity for knowledge creation that people with different backgrounds and experiences encourage to achieve common objectives and to do activities. Used information technology in this section includes collaboration tools that allow communication is found regardless geographical limitations.

The second step is knowledge life cycle, documentation and data storage. One of the challenges for managers in the implementation of knowledge management is how should acquire knowledge and how it is encoded so that they can be easily stored or transported. In order to be properly stored or be transferred knowledge is necessary to adopt appropriate

policies and procedures. One of the major problems associated with documenting knowledge is that those who have knowledge do not know that other people may have need to it or it may be useful to them. In addition requisite knowledge development among individuals is to spend time and cost. After made documentation, the company should provide its storage field. Knowledge storage considers different forms knowledge that includes documentation of computer and paper. Access to this information through the use of networks, databases can facilitate. Information technology plays an important role in the development of knowledge management systems.

The third step is to transfer knowledge that is done in different levels, such as individual to group and group to group and can be transferred through formal and informal channels. New and unorganized knowledge is usually vertically and homogeneously knowledge and organized are distributed horizontally. Culture role of company is a very important in the distribution of knowledge. "Jarvenpaa," and Astapls "believe:" Distribution of Information is a voluntary activity and the owner does not have to distribute. "

Organizational support for distribution of knowledge is done in various ways. The most traditional method is to transport people from one location to another location. But there are more appropriate methods that show favourable results. An example of this method is the modelling team. These teams by determining effective process of the internal and external can offer favourable solutions. Moreover, the supply knowledge and encouragement individuals to the correct distribution are point that should be understood in knowledge management efforts. Another way creating organizational support field is creating teams that they have a duty to encourage distribution of knowledge. Encourage to distribution of knowledge requires that organizations attract resources, equipment and management support. Organizational structure should also be support distribution of knowledge and otherwise is caused slow of knowledge flow. This requires flexible structure and open environment, so that both within organization and throughout supply chain is distributed desirable knowledge, so mission, strategies, objectives and reward systems of organization support from knowledge distribution.

The fourth step of knowledge life cycle is re-using of knowledge. Reuse has adequate attention to achieve and use of knowledge storage in the same way that has attention to use experts. The reuse of knowledge requires that First, users can call them in necessary time and secondly, know how can use it to solve their problems. Modelling as a form of reuse can help to achieve performance. Foreign modelling of organizations has proposed guidelines for change. Company must create fundamentally improve in the current process by using successful models and functions of other companies. Reuse of knowledge is possible through acquisition. This work is done by buying of knowledge from external sources such as patents or exclusive exploitation. Internal modelling is another method which has its own benefits and challenges. Internal modelling is consistent with activities of company and can provide the best solutions, although organizational culture is not always consistent with this tendency. Companies need to design structural that provide time and resources necessary to take advantage of the wealth of information. Success of reuse strategies from knowledge requires that Companies should consider the knowledge and use it separated, because knowledge is useful when it is used. But many projects don't have such an approach and technical aspects of the project are more important than why it, some reasons for this include unequal access to information for the utilization. Value of information may not be clear and finally individuals who create knowledge needed have little relationship by decision-makers. By understanding these problems, management can concentrate better and can developed structure somehow enhances the reuse of knowledge. All expressed steps are important for knowledge management in organizations. Achieving better results will achieved by understanding the practical application and theoretical of knowledge (10).

9 - Challenges of Knowledge Management

Knowledge is constantly changing, So that the value of knowledge as well as physical assets gradually erosion. As product development is caused increasing marketing and research and development and commercial performance, Knowledge management also improves It. Content of knowledge management systems must be updated regularly. Understanding the life cycle of knowledge helps to organization in understanding how knowledge management capabilities to other related aspects to knowledge management. If other organizational dimensions don't work effectively, The KM efforts won't be effective. Another important issue is that all dimensions of organization should be developing co-ordinately. Also management should be aware that many factors affect knowledge management projects that are not necessarily related to financial measures. Investment in Knowledge management is not necessarily profitable. Manager Xerox Corporation is a reminder that American industry has been considered less important for knowledge management Instead of investing in technology is more than a trillion dollars. Some of the challenges of knowledge management include:

Active participation of employees, to continuously update knowledge and distinction of useful information from un-useful.

Requisite for success of knowledge management is that employees understand that they are complementary part of knowledge management. Establishment of proper knowledge management requires spending time. So that from stage of determination or the deployment takes at least two years. Knowledge in high volume produces surplus information. Knowledge should properly be classified. So that organizations people are not confused by ambiguous information. If the supply of knowledge be limitless, in fact information supply will be useless. Its obvious example is internet. Although the Internet is known as an excellent source for finding information but it is difficult to find specific information.

Creation of successful project requires manager proper understanding from success. Management concerns that may not be measurable project success. In fact, it is difficult to determine the value to knowledge. Criteria such as cycle time and Efficiency of models can be used as a starting point. While management trying to quantifying the success of the project; however this view is not the best for knowledge management. Organizations tend to focus on the metric rather than attention to outcomes and results of knowledge management activities. The activity metric do not show an accurate measure of the real values and do not consider the human factor. Many metrics neglect to the efficiency, reduced stress, improved efficiency, and many other benefits that can be achieved through knowledge management.

But the biggest challenge in knowledge management is still its implementing and primary steps. Modelling can help to create increasing power. For further support select the project that company achieve to its aims. On the other hand company must ensure that sufficient resources are available to implement projects and it will not delay its process by competitors. Reward system that encourages knowledge transfer and encouragement provided to management levels is a key element and it has equally important that technology to support the information exchange network is important. Management must show continuously support to maintain effectiveness.

10 - Knowledge Management Barriers

Success of knowledge management requires a strong determination of organizations to overcome existing obstacles in the way management knowledge. Many organizations find that knowledge is important and apparently value and validity distinguish to it but practically do not work to resolve existing obstacles in the way of knowledge management. Knowledge management in organizations should be believed and employees and managers believe to its

effectiveness and only in this way that they will attempt to remove barriers. Major barriers in the way of knowledge management can be divided into five main categories as human factors, organizational factors, and cultural factors, and political factors, technical and technological factors.

A - Human Factors

One of the major challenges of knowledge management is that people don't want sharing their knowledge any reason and use exclusively for their personal development. It can perhaps say that human barriers of knowledge management is an important more than any other barrier because knowledge has human nature and social and only can grow depends on the interaction and communication.

B - Organizational Factors

Organizational factors are as well as important barriers to knowledge management in the organization. The main factors are:

- 1- *Structural factors*: Knowledge management imposes new demands on different parts of the organization structure. Rigid structures cannot be a good field for knowledge management. Organizational structure should have necessary flexible and dynamic.
- 2- *Management Factors*: Lack of top management support and belief in from activities and programs of knowledge management, short-term view and partial view and inadequate leadership styles will be also prevented successful implementation of knowledge management programs.
- 3- *Job Factors*: Inadequate job descriptions, repetitive and routine jobs, ambiguity and role conflict for knowledge management are unsatisfactory.
- 4- *Salary and compensation systems*: These systems play an important role to supporting knowledge management programs. People attempted to distribute the knowledge when has necessary motivation.
- 5- *Training System*: In convert traditional system to a learning organization, training programs organization plays a crucial role. Inadequate training programs can be creating a major obstacle to knowledge management.

C - Cultural Factors

Impact of cultural factors on the effectiveness of knowledge management programs is undeniable. If in cultural, acquisition and distribution of knowledge is seen as a valuable and people believe to effectiveness of knowledge with experience, will attempt for knowledge acquisition.

D - Political Factors

Political obstacles are more dramatic in governmental organizations. Stable or unstable of political atmosphere in country due to influence policy making process and stability the management in governmental organizations affect knowledge management.

E - Technical and Technological Factors.

Organizational knowledge is achieved the interaction between two types of knowledge and this interaction is consistently and It is not intended the final time for it. Knowledge created must be maintain to appropriate way and while many organizations don't have proper reference and centres for the maintenance of knowledge (2).

11 - Strategies necessary to the establishment of knowledge management in organizations:

After reviewing the benefits and barriers the establishment of knowledge management in an organization, strategies for the establishment of knowledge management in organizations is explained:

1- Human resources and organizational structure is most important factors of full deployment of knowledge management in an organization because these factors are influenced for the other factors. In the area of human resources and recruitment process can be used forces that have willingness to learn, create, and sharing knowledge and in performance evaluation system for evaluation of staff participation should be done based on the exchange process and use of knowledge. Education systems should be designed based on creating motivation of a deeper learning and apply knowledge in the workplace and to transfer to colleagues. Material reward system should be based on encouragement and appreciation of those who have created knowledge transfer and developing partnerships between individuals. Scientific conferences for the transfer of successful forces experiences and retired to other forces can be successful in the establishment of knowledge management in organizations.

2- Knowledge management position in the organization structure should be determined and the standard requires in organizations should be developed and designed. Increase awareness and inform employees of the changes and benefits from the establishment of knowledge. Culture of participative management and the question and study is institutionalized in organizations. Processes, procedures and instructions are constantly reviewed and are resolved defects. From new systems and technology is used in the organizations structure and in organizational structure by creating systems and methods that are directly related to knowledge management, design new approaches and systems and top managers with success organizations in this field have effective communication and participation. Of course scholars and thinkers in the field of knowledge management are offer so many ways to institutionalize knowledge management (9).

12 - Competitive Advantage

Continuing with economic growth, organizations need a better way to manage their knowledge assets. Today's competitive play style has changed. The most important how we use information for competitive advantage and it is not only important having information. Competitive pressures in the market will be forced companies to revise their knowledge assets and seeking ways to create value. But many of current projects are just collecting information and this information does not create any innovation. "Gold et al" defines to acquire the competitive advantage such:" Supporting knowledge management is including the ability to coordinate activities, respond to market changes and reduced duplication of information and knowledge".

Competition based on knowledge management requires that either companies need to analyse their data and also to analyse their structure and culture. The management should create conditions of use of existing knowledge provides the necessary condition for the development of new knowledge. Competitive ability based on knowledge through the growth of information technology and resources such as the internet is possible. Organization that uses knowledge effectively, it is necessary to have a proper strategy and structure. Companies of "toys" and "amazon com" Suddenly its competitors through influence large groups from customers through the Internet, were faced to risk but companies' Brdrz "and" noble "and" Barnes "from its online bookstore system to speed established their business processes through reengineering and company "Toys.R.US" he responded gradually to these changes. In these industries, knowledge management is a strategic tool. Knowledge management as a competitive factor has taken an important step in the trade cycle and currently it is considered as a key source of competitive advantage (11).

13- Conclusion

Nowadays knowledge management is considered a competitive advantage for today's organizations. Knowledge is information that its production requires active participation of employees. Knowledge is an unlimited source of competitive advantage. Knowledge should be managed best way and have been lowest risk for organizations. Though knowledge management has many advantages but it also has its own special challenges. It is difficult to show the value of knowledge management systems with numbers and figures. Organizations must have a culture that stimulates employee participation. Knowledge management should be developed along with environmental changes. Useful knowledge should be separated from useless information especially when we are faced with an abundance of information on the Internet. "Peter Drucker" believes that the biggest challenge facing knowledge organization is external data, such changes are imposed from outside to organizations. Competitive pressures are causing that companies reconsider their knowledge assets. However, knowledge management is along with the challenges, but has a huge advantage, as it is cased the market changes, reduce costs and ultimately competitive advantage.

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