

IT and its Deficiencies in Organizational Knowledge Sharing

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Abstract

Developing the appropriate IT infrastructures is one of effective technological factors lead to organizational success in the deployment of knowledge management strategy. Nevertheless, the existing researches indicate that IT management, considerably, takes the lead from human's ability in comprehension and unanimity with together about needed information and the shares. The reason is that, knowledge sharing progress in recent decades has not been so considerable in comparison with the marvelous improvements at the domain of IT. In the proposed paper, we have focused on the important matter that although some resources pretend to show considerable organization's knowledge sharing and increasing capabilities of IT to reach this possibility, knowledge sharing is still very difficult. To comprehend the knowledge sharing motivations, and perhaps more better, the motives of preventing to share, an appropriate imagine of the organization should be constructed. Therefore, this article investigates the theory of cultural based view and the political one of organizations efficiencies and comparison of these two mentioned theories. In addition, the roles of informal nets on knowledge sharing are considered.

Keywords: Information Technology (IT); Knowledge Sharing; Organizational Culture.

Introduction

Today, in most organizations, information, especially knowledge, is considered in important strategic sources and competencies. Merits and ability to share and integrate information and knowledge has formed the organizational fundamental capabilities; however, the major effort and systems in order to achieve this sharing leads to failure. Even in the case that the technological capabilities and information technology is enough, accomplishing of such an achievement has occurred very scarcely. (Hislop, 2002).

Unique feature of the new millennium, which is referred to as the information age, is innovation and rapid changing. Organizations of scientific age, at all levels are confronted dynamic compatibility rigid challenges. It can be said that the new millennium will be outlet of organization invasion which can serve the amazing ability of science and use in order to upswing competitive advantage. Today organizations faced with massive amount of information and knowledge that correctly management and operation has become to great concern for these organizations. Managers of knowledge-based organizations use information technology (IT) such as driving force and effective factor in progress and success of science management and overcome in problems. Science management that is produced and wealth

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process by use Intellectual property and knowledge-based requires a system that can support this process.

IT as most important enabling factor for science management process, high speed and accuracy of the knowledge management process has improved dramatically. Create science hint to the ability of organizations to develop new ideas and solutions that are useful. Science management such as information systems has roots in other field reference. Enrichment of this new field, approximately at least, due to numerous branches of learning from multiple perspectives in the study of efficient use of information and knowledge is used in the organizations (Daft and Lewin, 1993).

In Information systems and science management field, many serious discussions occurred because researchers and users viewpoint in this field, from basic definitions to highly complex cases, in areas of IS and KM systems, the pay dispute. This condition is not necessarily a bad situation because often result of these extensive arguments are constructive, achieve new concepts and creative solutions.

Organization and Knowledge Sharing

In general, organizational knowledge should be used for products, services, and organization process. If an organization can't easily determine the correct form of knowledge in the suitable situation in competitive arena will be difficult. When the innovation and creative is the way to victory in today world, the organization should be able to use science in relevant situation. Organizations in order to guide the individual science to organizational goals should create an environment with shared, transfer and interaction science among the members.

In general information and communication technology (ICT) application added more on the complexity work environment of human and has defined his new responsibilities. In such context of traditional, processes are restricted and further studies will be exposed to meet cognitive thinking.

With the wider application of technology in order to perform routine tasks and planned, Dynamism and creativity of human in the organization is shift to super area joint activity. Daneshar says in this context, individual science is not single important matters but something such as shared beliefs, and when, how, and with whom this beliefs and knowledge can be said (Daneshar, 2003).

Despite claims resources, in relation with sharing the science and information in organization and indisputable ability and increasing ICT to make it possible, knowledge sharing is significantly difficult. For instance, more than a decade ago, Davenport said that: "IT management significantly has taken of ability in understanding and consensus about required information and idea of organization information is far from reality". It should be said that since then, situation has not changed so much (Davenport et al, 1992).

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Kendall (2002) by debate about project management E-commerce, such as that organizational policies should be active, because the units often feel they have to care their data And a result need to share in the organizations do not understand.

Clearly, the motivation for sharing information and knowledge is better than not to be motivated; but this understanding must be based on theory or correct organizational image a theory as perspectives culture-oriented and policy-oriented organizational functions (Morgan, 1997).

The organization, during different period of their life has evolution in their various stages. In this passage, the change in organizational structure and is in the center of change in organizations changes and development. Authors classify the changes in organizational structure in different methods. They examine the effect of factors that have different content like: environment strategies, technologies, etc.

Then, the two culture-based and policy-based perspectives will be examined. Table 1, describe these two perspectives in summary and compare the different ideas. Despite dramatic progress in the field of software information technology recent decades, and its current pervasive presence in organizations, significant progress in the field of sharing information and knowledge is not created. Recorded written in this field considered number of factors are efficient which can be generally classified into two major groups are: A- Lack of infrastructure is the main organizations, and B- Issues of ownership, trust, and power and organizational politics.

Common culture makes peoples that have the same way in describing of feeling of their own world, as same as determinate the important issues, and as same use sources of considered environment. Science of this common view about their work place and their rule make create common understanding and so performance, such views common knowledge about the workplace and their role is causing the development of effective communication, building trust and mutual understanding. Sharing information and knowledge conclude positive feedback of the same understanding and reinforces of shared identity.

Information systems facilitate information and knowledge sharing, so that people will be capable of finding their required information more accessible, at the right time, and in the right form.

Progress in this area, which is the result of existence of appropriate organizational culture, leads to knowledge sharing systems and provides information. Such systems allow people to self-identify as they work together, and not so common is that they are required to use the system that made them. Organizations, their activities and their problems are always dynamic in nature, but unfortunately, static systems are still ordered for these organizations (Warne et al, 2004).

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Viewpoint	Organizational perspective of culture- oriented	Organizational perspective of policy-oriented
Organizational work sharing & integration	Knowledge sharing is essential for the coordination and integration of organizational work.	Integration the organizational work or Mandatory and selectively sharing knowledge will be done as the best.
Agreement & common identity	The sharing of knowledge and agreement shared identity among the members makes possible and is supported by that.	Texture is the only thing that is important; sharing agreement and identity, unless as are accessible other limitations.
Organizational sharing & consistent	Sharing information and knowledge to align objectives and common purpose among members of the organization.	Information and knowledge sharing among members of the organization is doing that they think their goals are aligned of each other.
Sharing of organizational culture & politics	Information and knowledge sharing creation depends on organizational culture that recognized it and as result will prevent political problems.	Culture change is a stamina process and in any case, resulted sharing of motivation and evaluation common organizational, not cultural characteristics.
Lack of willingness to share	Non-preventable motivation prevents knowledge sharing.	Lack of enthusiasm for knowledge sharing may lead to concern for better organization performance, and the motivation to be non-preventable.
Sharing approach	Efficient sharing of knowledge can be achieved by through better understanding organizational work and define system requirements internal culture of sharing.	Facilitate this sharing of for the people who they see fit them self and When they are suitable. It's a way for sharing

Table 1. Comparing the two perspectives of organizational culture- oriented and policy-oriented

Nonaka believes that there are a few people who easily are able to share their knowledge with others. There is two potential problem of conception and attitudinal of staffs in this area that how they should be prepared to share their knowledge and so how to overcome the resistance to knowledge sharing in organizations (Nonaka and Takeuchi, 1995).

Information and knowledge is felt, and the user needs to better analyze and understand the culture of the organization of the system is working. In a culture of knowledge sharing, people ideas and insights can share with others because instead of forcing it to be considered a natural process. However, generally in large organizations, individuals tend to be a source of knowledge with power for their own personal interests.

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Here it should be emphasized that adding the information systems is not the permanent solution of problems. First, must create the culture of cooperation and sharing and design incentive programs to reward the teams to determine that organization values the group's work and collaboration. Undoubtedly, one of the affective technological factors that make organizations succeed in using of management strategy of knowledge is expansion of adequate infrastructure of IT. Using Internet, internet, email, fax and video conference are the samples of applications of ICT that are utilizing in knowledge based organizations and by this aspect, these convert to electronic organization.

Using of IT makes hierarchical levels cannot limit organizational communication. The organizational staff will be able to connect to anywhere and any people quickly and at any time. These technologies make knowledge-based organizations empower and as the most effective means of collection, storage, transfer and dissemination of knowledge are considered.

Organizational Politics View Point

Classic organizational theorists and somewhat less, those who belong to the culture of schools, believe that organizations typically have the "philosophy of trust and support of other members" (Kakabadse and Parker, 1984). Those organizations that do not have such an attribute are not functioning; But scholars of organizational strength and politics, rejected this theory and Insist that "strength is a part of organizational behavior" use it efficiently, which action is political, perhaps the most personal and organizational goals and organizational activities ensure that all (Fairholm, 1993).

The vision picture of politics and strength of the organization is a collection of groups and individuals that have a goals, beliefs, interests, values, desires and different perceptions and this view is consistent with the cultural point of view.

But it is also claimed that the differences in opinions, if not the norm, But anyway is common. Coalitions are formed and are thrown together again. And differences, conflicts and political activities of organizational life are natural and inevitable. In addition organizational scientists have different ideas about what could have political behavior. Some of the organizational politics of interest groups are known to influence decision-making power, while others serve on its nature and the emphasis on individual without sanctions. Even some know social policy process and affect the organization. Potentially it follows positive function or operation management the organization or merely management (Ahmed et al, 2002).

The Way of IT Influences on Knowledge Management

Information technology is much broader than computer science (and more obscure). This term replaces the terms in the 1990s, data processing and management information systems that were popular in the 1970s and 1960s. IT production and processing, storage and distribution of information usually refer to large enterprises. IT and computer science are different, but in many cases, have shared together. If you like computer science, mechanical engineering, we

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are information technology similar to the transportation industry. In the transportation industry, and railroad cars and planes and ships have. All these projects are mechanical engineers.

In transportation fleet management and traffic management issues and strategies at the corporate level and the city and country are important. No direct relevance to mechanical engineering but undoubtedly Information and Communication Technology (ICT) is the most important issues in this field. As described by the "Information Technology Association of America (ITAA) » is defined as, "to study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware deals» In short, IT deals with issues such as the use of computer electronics and software so Conversion, storage, preservation, processing, transmission and data recovery to be done in a safe and secure.

Recently, this statement is slightly modified to include the term electronic communications is clearly circular. So more people want to include "information and communication technology» (Information and Communications Technology) or short (ICT) are used. The knowledge can exist by informal nets and self organized companies that will be systematic in time. Scientific Assembly composed of people who learned to come together because of common interest. He said it's usually through telephone or e-mail and network communications to occur.

In recent years there has been significant progress in information technology that has been created new possibilities for knowledge management process.

For example, tools such as high-capacity data storage, decision support systems (DSS) and the electronic performance support system (EPSS) have contributed much to knowledge management. Increasing number of personal computers and communication networks to acquire and retain new knowledge can provide to gain a better competitive position for organizations. The computer networks between geographically dispersed people with common goals but have to communicate and their ideas and creativity beyond the boundaries of time and a place to share and combine.

The highest value of information technology is in knowledge management, increase availability and expedite the transfer. The extraction of knowledge from the minds of owners of information technology provides knowledge. Then with this technology you can set knowledge included in the regular formats and with the other members of local organizations and partners worldwide to encode and transmit and helping creating it.

Two major information technology capability to provide knowledge management: on the one hand with the explicit knowledge can make an expert system or decision Pyshtbany; Secondly, with information technology expertise it is possible for people with special Maven other activities are underway and will provide rapid communication. Information technology can affect knowledge management in different ways:

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- a. Gather information quickly, saving the building and facilitate exchange of knowledge in a way that is not in any way possible.
- b. IT integration and cohesion of the various components of the knowledge that if you have the detail. This caused a loss of cohesion in the communication barriers between different parts of the organization.
- c. Enhance all methods of information technology, transport, storage and application of the knowledge.

The Role of Informal Networks in Knowledge Sharing

Systems thinking, Senge (1992) says, as it requires changing the mindset is the meaning that attaches itself to know the organization and not apart from it. Whether or not this kind of thinking has very close relationship with nature of organizational culture. It supports the thinking and culture of the organization of interaction between staff and the considerable volume of information and knowledge sharing will be created.

Important tool for both personal and social networks, includes the acquisition, dissemination and sharing of information and knowledge. Therefore, multiple sources of knowledge is available to people so they can enjoy them when encountering problems. As a result of separate and individual thought is impossible. It must be emphasized again that the organizational culture that is supportive of the transition and growth of these networks and their interests; however such networks are mutually reinforcing.

Senge (1992) determines the fundamental distinction between learning organizations and traditional organizations in the dominance and superiority of the five principles of systems thinking, interpersonal skills, mental models, shared vision and collective learning. This learning rule is based on a rule and it is a common cause. However, another main pillar of individual skills. But the shared vision and individual talent alone is not enough. Unlike the individual and collective learning capabilities that are relevant to understanding people is considered primarily a military group.

If we draw the member of a team as individuals with varying degrees of personal power, then their work force in each direction are different, the case will be something like Figure 1.

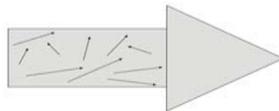


Figure 1. Individual features in a group (Senge, 1992)

Before the power of individuals to strengthen with same direction, is a necessary condition. Enhanced when people with low level of adverse, the situation makes it harder and harder to manage them. A prominent feature of the groups that are not properly aligned, the energy is wasted. Figure 2 shows this.

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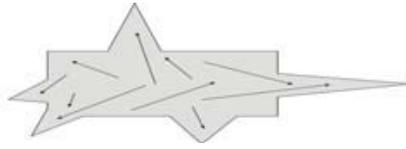


Figure 2. Strengthening individual capabilities in a group without attunement and synergy (Senge, 1992)

The best situation is when the groups are well aligned. Subscribe to this case, and there will be a consistent between coordination and people. In this case, less energy will be lost. None of the individuals and their personal interests and the interests of the victim do not make a point. Figure 3 shows this phenomenon.

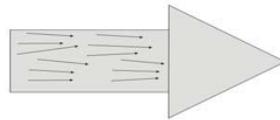


Figure 3. Coordination & consistency in the ability of individual members of a group (Senge, 1992)

Informal networks, in addition to meeting social needs, they play a central role in disseminating knowledge. New knowledge often occurs due to the availability of personal knowledge. The most important activity is the knowledge-generating organizations. Technologies such as email, fax, phone, tools are extremely valuable in the process of sharing information and knowledge, but these tools only play a supporting role. Split depends on the quality of formal or informal talks, and that the talks between what happen and how are subject to existing organizational culture (Webber, 1993).

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The role of technology is creating the right culture for sharing information and knowledge. Organizational culture that values the exchange of knowledge and understands has a very important role in transferring knowledge of successful plays. Such is the culture that creates opportunities for personal contact. In a culture that respects knowledge. The importance of knowledge not only management to understand the job success but Its ability to develop and grow in time and place will follow the (Webber, 1993). Lack of understanding not only the spirit, the confidence, organizational continuity, align goals and a shared identity, and consequently, opportunities and motivation for learning and innovation, and creativity affect the public.

Finally, while most organizations should be admitted due to the individual needs of people, politics and power, are motivated and even in the course of their individual goals are also affected by corruption and wrong but in general, it can not be generalized. Conversely, if the environment (organizational culture) and tools (such as KM and IT systems) are appropriate based on real needs, the majority of people working toward common goals as a group, look

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forward to sharing with others their knowledge and resources to solve organizational problems and to bring the boom (Davenport & Prusak, 1998).

Conclusion and Recommendations

Since many organizations are working in different dimensions of environmental uncertainty, dynamism and independence and their need to be a better use of information and knowledge systems. This concept of user needs analysis to better understand the culture and organization of the system is working. It also prevents the use of information technology to some extent limited by the levels of the hierarchy in the organizational communications.

Two major IT capabilities to provide knowledge management: explicit knowledge, and the rapid communication among knowledge stems. On the other hand, individual and informal social networks, including the important tools for acquiring, disseminating and sharing information and knowledge. But this should also be noted that the organizational culture that is supportive of the transition and growth of these networks and their interests, although such networks are mutually reinforcing. Also, sharing the quality of people depends on formal or informal talks and talks between the whom and how this occurs is subject to existing organizational culture.

It is worth mentioning that the addition of information systems is not a permanent solution to the problems. First, the culture of cooperation and knowledge sharing must be created. Incentive programs should be designed to reward the teams, not just the individuals, to prove that the organization values collaboration and admires the group's work.

References

- Ahmed, P., Kok, L., & Loh, A. (2002). Learning through knowledge management. Butterworth Heinemann.
- Daft, R., & Lewin, A. (1993). Where are the theories for the “new” organizational forms? An editorial essay. *Organization Science*, 4(i-vi).
- Daneshar, F. (2003). A methodology for sharing contextual knowledge in virtual communities. In *Proceedings of the 14th Annual IRMA International Conference*, Philadelphia, PA, May.
- Davenport, T., Eccles, R., Prusak, L. (1992). Information politics. *Sloan Management Review*, 34(1), 53-65.
- Davenport, T., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Boston, MA: Harvard Business School Press.
- Fairholm, G. (1993). *Organizational power politics*. Westpot, CT: Praeger.

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- Ferris, G., Fedor, D., Chachere, J., & Pondy, L. (1989). Myths and politics in organizational contexts. *Group and Organization Studies*, 14(1), 83-103.
- Hislop, D. (2002). Mission impossible? Communicating and sharing knowledge via information technology. *Journal of Information Technology*, 17, 165-177.
- Jordan, B. (1993). Ethnographic workplace studies and computer-supported cooperative work. *Interdisciplinary Workshop on Informatics and Psychology*. Scharding, Austria.
- Kakabadse, A., & Parker, C. (Eds.). (1984). *Power, politics, and organizations*. New York, NY: John Wiley & Sons.
- Kendall, K., & Kendall, J. (2002). *Systems analysis and design* (p. 73). Upper Saddle River, NJ: Prentice Hall.
- Leavitt, H. (1965). Applied organizational change in industry: Structural, technological and humanistic approaches. In: J. March (Ed.), *Handbook of organizations* (pp. 1144-1170). Chicago, IL: Rand McNally & Co.
- Morgan, G. (1997). *Images of organization*, new ed. Sage Publications.
- Nonaka E. Takeuchi hH. (1995), *The Knowledge Creation Company-How Japanies Companies Create The Dynamics Of Innovation*. Oxford University Press, Oxford.
- Schein, E. (1997). *Organizational culture and leadership*, 2nd ed. Jossey-Bass.
- Senge, P. (1992). *The fifth discipline: the art and practice of the learning organization*. Sydney: Random House.
- Warne, L., Ali, I., Bopping, D., Hart, D., & Pascoe, C. (2004). *The network centric warrior: The human dimension of network centric warfare* (U. DSTO Report CR-0373, Defence Systems Analysis).
- Webber, A. (1993). What's so new about the new economy?. *Harvard Business Review*, Jan-Feb, 24-42.