A MACRO PRACTICAL FRAMEWORK FOR KNOWLEDGE MANAGEMENT IN NETWORK ORGANIZATIONS

Seyed Mohsen Naseri1, Atefe Rouhani1, Marziye Sadat Anvari2
1Department of Information technology Management, Tarbiyat Modares University, Tehran, Iran
2Department of Executive Management, Babol Branch, Payame Nour University, Babol, Iran

Abstract

Today’s world is entering the knowledge-based economy. In this economy, knowledge and intellectual capital management are among the most important assets of an organization. Implementing an efficient knowledge management strategy and transforming an organization into a knowledge-based one, is considered one of the fundamental qualifications for the success of the organizations that enter the knowledge-based economy.

With the transformation of organizations, like network organizations that reshape from classic form into modern and modified form, the importance of knowledge management has been doubled and it has become one of the most fundamental issues and concerns in the management of these organizations. Many thinkers have identified that the execution and implementation of knowledge management in an organization are vital elements in knowledge management, while the other elements can be regarded as an introductory for preparing infrastructure and utilizing them to practical realization of knowledge management. When organizations utilize knowledge management the confidence in organization increases, communications become more effective, teamwork culture grows richer, responsibilities become more transparent, self-assurance increases, the administrative processes are codified more scientifically and the professional ethic will flourish. This study attempts to provide an in-depth study of library resources and propose a macro-model for knowledge management implementation in network organizations. The goal of network organizations is to utilize the macro-capacities completely while the preserve agility and flexibility, however the optimal use of the organization’s knowledge resources in trivial organizations within created networks will not be an easy task.

After an thorough review of literature related to virtual organizations and networks and knowledge management in them, and also surveying the processes, details, advantages and limitations of knowledge management, and concentrating on main components of knowledge management in network organization, the proposed operational pattern for knowledge management in network organizations, which consists of key performance indicators in administration and implementation of knowledge management and the communication within the organization and also outside the organization.

Keywords: Knowledge Management, Network Organizations, Practical Knowledge Management Framework.

1. INTRODUCTION

Technological and cultural changes have affected lifestyle, behavior and many other aspects of life. Organizations are not excluded from these changes and even in modern societies;
organizations sometimes play a more central role than personal life in individual’s life. Organizational culture, organizational society, and other organizational characteristics are among instances that individuals encounter every day and they play an important role in their lives. In the modern world that is named Global Village, the competitiveness has enticed organizations to find and execute the best plans that comply with employee’s satisfaction and are consistent with their morale, productivity and more efficient usage of resources and potentials. Hence organizations transform from classic form and rules into new ones and endeavor to improve themselves constantly.

Modular and network organizations are new form of virtual organizations that top managements attempt to gain great advantage by their implementation and in today competitive world survive and compete. However as the formation of organization changes, many rules and procedures change and new questions may come into the mind of managements; one of them is the way that the organizational knowledge should be managed.

It is not hidden to anyone that one of the main factors in survival and excellence of modern organization is their success in organizational knowledge management [1] and the high level of competition in knowledge management makes the speed of creation, publication and utilization of knowledge management very important [2] [3].

Hence if we are going to have perfect, strong network organizations that have favorable productivity, other than enterprise resource planning and management, we have to use a fair knowledge management to successfully continue our activities in the current competitive and knowledge based world.

In knowledge-based organization in which information protection is vital, establishing a balance between the information security and reducing access, in contrast with sharing information to promote the employee’s knowledge is difficult and essential. The more it is easy to access the information the more its security decrease and the possibility of data theft increases, inversely the lower the access the harder the use of knowledge.

Another problem that arises in knowledge and network organizations is that meanwhile the organization outsources its major business functions to downsize itself to small core; it needs to protect and promote the organization’s knowledge level. Large organizations incline to reduce the size of the organization and outsource non-critical and non-essential tasks to networks, however the knowledge won’t get weak and they keep their knowledge growth as before and even better than before. By outsourcing of many tasks, their knowledge also will be given to outside and hence the access of the organization’s core to these knowledge will be more difficult and the organization should plan and manage the knowledge in a way that it maintains the knowledge of network in an acceptable level.

This study seeks to provide a framework for knowledge management in network organization to explain the requirements of knowledge management in these organizations and to help to solve the detected problems. What in this research will be discussed are state, goodness, and badness of knowledge management in network organizations. Because by downsizing the organization’s body and transforming organization into a virtual organization, they have several differences with the conventional organizations, hence for them the managerial affairs such as control, monitoring and planning are more difficult.

2. NETWORK ORGANIZATION

A network organization can be defined as an environment that people utilize to achieve their ordinary goals [4]. The salient progress of these organizations began in the early 90s and advances in network services such as the Internet and the World Wide Web during last decade,
has brought about mutual support required for this type of. Since then, a large number of institutions are organized in networks, for example those that are focused on a few sectors such as women's rights, the fight against poverty and child abuse. This version of the network can be defined as a strategic response to those who have mobile ambient pressure to provide a motivation to transfer and disperse job applications for specialized patterns in continuities and cooperation [5]. Example of this network is an active area in organizational research [6] and sociology [7]. There are several theories of a network organization. A behavioral theory of the social network is a model built around a set of people and situations and groups, and the organization. A strategic view of the network organization introduces this circumstance as "the purposeful, long-term preferences between distinct but beneficial entities" which allows these organizations to achieve competitive advantage [8]. In order to achieve its goals with minimum effort, an organization requires the knowledge management of the relevant members. The effort of network organizations is focused on problems prevention and creativeness in market competitive advantage. Network organizations are formed with the goal of developing cooperation between different companies to produce comprehensive products and achieve collective performance. By developing a network organization, retail partners utilize each other's resources and skills and offset each other’s weaknesses. Besides the technical aspects, a network organization also emotionally induces energy and the spirit of collaboration into organizational culture [9]. The outsourcing process of non-essential tasks to outside of the firm also has encouraged such partnerships. By simplifying the internal structure of each member company, a network connection increases the efficiency and flexibility of the entire network, which entails customer satisfaction and external economies [10]. Development of the network structure isn’t usually a sudden and decisive action, but is a gradual and evolutionary process to achieve the most effective pattern in the long run. This design is an initiative which means that one cannot mathematically prove its optimality. On the other hand the network organization is considered a contingency phenomenon, meaning that there is no model that achieves the best answer and is applicable in all situations. Effectiveness of each model is measured according to the requirements of its particular environment [11]. Support and survival of a network require special policies; in this regard formulation and implementation of HR policies and performance evaluation and reward systems in accordance with the requirements of the network organization are among the most important factors for support and survival of the network [12]. HR in mother firm should be aware of the partnership policies in network adapt to cooperate with staff from other companies in the network. At the same time, they have to be trained on what information they should give to their network partners to enhance the efficiency and facilitate jobs and which parts of the information they should protect as Secrets for mother firm. Performance appraisal and Reward systems in network must be designed in a way that parties in the network benefit from it. Otherwise, communication in network, will be fragile and temporary and will be costly for both sides. In general we can say that the development of win-win relationships, as the most important motivation for developing a network organization, will ensure long-term partnership within the network. In fact a network organization is a long-term partnership between separate but interrelated organizations that supports the member organizations in order to gain or maintain a competitive
advantage [13]. Partnership of organizations that are members of network relies on collaboration and profits that organizations gain exploitation of each other’s complementary resources are more than their independent operation. Network organization have different forms and structures such as transactions, joint., R & D joint, joint production, joint marketing, joint permit, long-term supply agreements, alliances and so on. During the past decade the number of network organizations has grown rapidly. For example, in industries like automotive, electronics, pharmaceuticals, biotechnology and apparel production, network organizations have the supremacy in production. The influence of lean manufacturing activities and principles (ie, greater labor productivity and reduced inventory) thorough network organizations increased the power of Japanese carmakers to surpass America's auto companies it is similar to the networks before 1980s [14].

The infrastructures for network organizations are in fact models for social relationship between several set of people, posts, groups, or organizations. These models can improve the knowledge usage by providing a way to distribute knowledge across the organization. Transmission and use of knowledge is one of the important factors that will determine the effectiveness of a network organization requires distribution of the information about customers, products and operations among different users. However, these Organizations have specific characteristics that may prevent the transfer of knowledge and information. The purpose of this chapter is to explain the application of knowledge in organizations, and barriers for transmission and flow of knowledge and the ways to overcome these obstacles.

3. Knowledge dissemination in Cyberspace
Nowadays One way to promote and disseminate knowledge is the spread of knowledge through cyberspace. This phenomenon is significant in many aspects of today’s world. In the case of dissemination of knowledge through cyberspace, there are some facts, one is that cyberspace makes it cheap and available for all people to spread the knowledge in large scale. Another feature is that it is possible to form a space for democratic dialogue and create a public sphere through cyberspace.

4. Knowledge management in network organizations
In industrialized countries, the network organizations are pretty prevalent and it is used to increase productivity and competitiveness. Success of organizations depends a lot on sharing and transferring knowledge among the participating organizations. However, due to the relative autonomy of the member companies, knowledge management in network organizations faces challenges and problems (Archer 2002).

5. Knowledge Management
Knowledge, which is mostly in the form of new products and services, has become one of the main sources of wealth creation and sustainable competitive advantage. The factors that put knowledge management at center of attention are [13] 1 - Increase in the speed of change, 2 - Staff Weariness 3 – growth in Scope of Organization’s work, 4 - geographic dispersion due to market globalization 5 - New structures such as network organizations 6 – Knowledge-based goods and services 7 - IT evolution.

6. Sharing and transferring knowledge
Network organizations are not necessarily stable organizations, because the purpose of their existence may change. If these organizations want to survive, they evolve over time to reduce research costs and decrease the risks of related to the strategic treaties [15], and establish stable, safe, and rich relationships with its partners. Form of knowledge in organizations, the degree of
implicitness and method of manufacture, and its use and transfer vary among companies in different social environments. These differences play an important role in project failures, poor relationships between partner organizations, and asymmetry in knowledge transfer. It is believed that the primary role of the organization is production, storage, and use of knowledge. Network organization strengthens this role because it is formed to 1- specialize and diversify markets and networks, 2- enables to access further knowledge 3- coordinate under the supervision of managers of Network organization 4- provides an information repository, and 5- provide competitive advantage through access to intellectual property rights [16].

Knowledge sharing and transfer is one of the main motivations of forming network organizations. Inter-organizational Social networks play an important role in the transfer of knowledge management. In these organizations, teamwork helps to spread the patterns and practices. Due to the experience and shared environment the variation in knowledge reduces over time. To deal with this problem, every period, organization should recruit new members. One way to deal with crisis management and replication process through the internal growth of the organization is mandatory relationships among companies via forming networks. It increases the company's ability to respond quickly to changes in conditions. Properly managed, this relationship strengthens corporate knowledge base and increases the relationships’ validity and subsequent transactions. But there is a bug that causes contradictions and cultural tensions and creates problems. The nature of knowledge has a significant impact on the process of knowledge transfer. If the relevant knowledge is implicit and cannot be transferred through simply written or symbolic form, its transfer across the boundaries of organization will not be simple and insignificant. These types of transfers can be facilitated through extensive interactions between two members and creation of an organization or a single community. In contrast, explicit knowledge as is found in information contained in the documents can be transferred simply, because it relies more on the legal agreement and less on the Social commonalities between partners. Organizational learning is a concept that uses a regular pattern of interactions and regular relationships among people to transfer, combine, or create specialized knowledge. This facilitates knowledge transfer between the inner and outer boundaries of organization. Tacit knowledge is transferred through regular meetings and members of any organization work together and share their tasks in this meeting.

Toyota’s network organization is often used as an example to illustrate the knowledge-sharing. Toyota's view is that the main role of the company is to create, store, and use knowledge not merely to reduce transaction costs. Toyota exploits organizational learning to achieve sustainable competitive advantage. Organization does this via learning, adopting, and updating the capabilities of partners and themselves. Industries such as biotechnology and pharmaceutical dependent on the network and their major challenge is the development of powerful, flexible and durable organizational routines for learning and knowledge transfer [17].

Inside network organizations, virtual collaboration is often used through simultaneous and non-simultaneous communication among and within organizations to overcome the problems of distance and long-distance and its role in knowledge transfer can be improved as following [18]:

1 - motivation to management
2 - expressing collaboration roles
3- Cooperation on the fruitful works (sharing knowledge, structure, and teamwork)
4 – Improving value by increasing the level of cultural diversity of team members
5- Appropriate training and work activities.
In Table 1, applications in a network organization are listed along with their activators. Suppose that there are three viewpoints for network organizations: Economic, Social, and Information processing (Systems) [19].

Table 1: knowledge management in network organization and its activators [19]

<table>
<thead>
<tr>
<th>Applications</th>
<th>Activators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory Reduction</td>
<td>pull-type Logistics (JIT)</td>
</tr>
<tr>
<td>Improvement in labor productivity</td>
<td>Coordinated division of labor, work flow, tasks management</td>
</tr>
<tr>
<td>time to market Reduction</td>
<td>Outsourcing, development or production</td>
</tr>
<tr>
<td>Customer Relationship Management</td>
<td>Relational database with a client - distributor</td>
</tr>
<tr>
<td>Production, identify new ideas,</td>
<td>Inter-Organizational learning</td>
</tr>
<tr>
<td>best practices</td>
<td></td>
</tr>
<tr>
<td>Supply Chain Management and</td>
<td>The inter-Organizational Information Systems, Work</td>
</tr>
<tr>
<td>Automation</td>
<td>Management</td>
</tr>
<tr>
<td>Transfer and sharing of ideas</td>
<td>Copyright, business secrets agreements</td>
</tr>
</tbody>
</table>

In Table 2, a set of inter-organizational parameters is along with and their resources, that affect the success of a knowledge application programs, has been posed. The importance of each factor and the level of activity in the network organization is a kind of dynamic network. The management of participating organizations should devise policies to develop and control these priorities and levels and to adjust them to environmental changes. Because management and knowledge transfer plays an important role in creating network organizations and often they are considered as driving forces, life and survival of the organization depends on the correct management of these factors.

Table 2: Factors that influence knowledge management [13]

<table>
<thead>
<tr>
<th>Factor</th>
<th>The relevant viewpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symmetry of value which returns to owners of intellectual property</td>
<td>Economy</td>
</tr>
<tr>
<td>Uncertainty and Risk</td>
<td>Economy</td>
</tr>
<tr>
<td>Market power</td>
<td>Economy</td>
</tr>
<tr>
<td>Learning Mechanisms</td>
<td>Social</td>
</tr>
<tr>
<td>Cultural adaptation</td>
<td>Social</td>
</tr>
<tr>
<td>Trust and loyalty</td>
<td>Social</td>
</tr>
<tr>
<td>business merger and integration</td>
<td>Systems</td>
</tr>
<tr>
<td>Systems integration</td>
<td>Systems</td>
</tr>
</tbody>
</table>

7. KM Obstacles and solutions

Organization and management of network relationships are much harder than hierarchical relationships; because there is no formal structure for network relationships and there is a simultaneous cooperation and conflict among the network organizations [20]. This problem results in uncertainty and demonstrates the need for compromise and consensus. However, as the number of firms in the network increases, the problems become more and more serious.

Although control of knowledge applications is important for the benefit of organizations, but it is estimated that more than 50 percent of these activities fail [21] it means that inadequate share of knowledge causes the failure of network as much as the network organizations fail. Therefore
resolving these problems through careful consideration of consistency of cultural environments of firms that are members of the network is very important. Mutual trust in network relationships is an important element for making cooperation and mutual support approaches and the market power of firms that establish these relationships cannot replaced these trust. By the way the power unbalance among smaller and larger companies can induce fear in smaller companies and only if larger companies control the design of product or technologies, the speed of knowledge transfer and learning will slow down. So balance should be established between intellectual property of supplier and consumer thorough setting exchange prices for goods or services. Since in developed societies (such as professional associations with similar practices, activities, languages, and records) often transcend the boundaries between organizations, knowledge moves easier in these societies than dissimilar groups and heterologous in an organization. Barriers to successful knowledge transfer include:

1. Lack of formal language that all team members can understand it
2. Stories of failures and habits that team members narrate
3. The formal plans and company’s paradigms.

Other obstacles include [22]:

4. Emphasis on expertise while monitoring and helping others are not stressed enough.
5.Unequal conditions (eg doctor / nurse) and distance (physical and time isolation) and preference for group with a particular communication method.

Techniques to overcome obstacles are as follows [22]:

1. Commitment of process champion to knowledge sharing process
2. Employing knowledgeable, experienced and competent members from other organizations
3. Choosing the projects with less risk and more benefit
4. Holding regular meetings and sessions for collaborators
5. Improving systems especially for knowledge management
6. Using different communication formats and procedures for tacit and explicit knowledge.

Suggestions for improving the creation and transfer of organizational knowledge that can be run on network organizations [22]:

1. incentive systems
2. Coach training programs
3. Issuing executive management statements regarding management’s expectations about trust and openness
4. Educational programs and social events.

These activities need the guidance of knowledge management heroes, the use of these tools for improving the level of trust and understanding, and opening new avenues for sharing knowledge and communication.

In Table 3, some factors are mentioned that affect the success of knowledge management in a network organization. Frequently before combination and merger of organizations, a detailed and thorough investigation is done which includes the study of consistency between socio-economic attitudes and network organization’s systems and this investigation is a requirement before constituting a network organization. Since network organizations work in a dynamic environment, management policies should be tailored to the participating organizations to enhance human resources and technical infrastructure, adjust the operational levels, knowledge
management factors and control of organizational performance of each factor. It will increase the role of knowledge management in success of network organizations.

8. **Key factors in knowledge management success in network organizations**

From the literature and explanations presented in the beginning of this paper, we determined the key success factors for knowledge management in network organization as following:

Table 3: Key success factors for knowledge management in a network organization

<table>
<thead>
<tr>
<th>Key Success Factors</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership and Leadership Support</td>
<td>[23], [24], [25], [26], [27], [28], [29], [30]</td>
</tr>
<tr>
<td>Culture</td>
<td>[23], [25], [26], [27], [28], [30]</td>
</tr>
<tr>
<td>IT</td>
<td>[23], [25], [26], [27], [28], [30]</td>
</tr>
<tr>
<td>Goals and Strategies</td>
<td>[23], [25], [26], [27], [28]</td>
</tr>
<tr>
<td>Evaluation system</td>
<td>[27], [31]</td>
</tr>
<tr>
<td>Organizational infrastructure</td>
<td>[25], [26], [27], [31], [28]</td>
</tr>
<tr>
<td>Activities and processes</td>
<td>[23], [24], [32], [26], [27]</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>[26], [27], [31], [28]</td>
</tr>
</tbody>
</table>
Each key success factor has sub-criteria that we present in Table 4.

Table 4: sub-criteria of the key success factors for knowledge management in network organizations

<table>
<thead>
<tr>
<th>Level</th>
<th>criterion</th>
<th>Related researches</th>
</tr>
</thead>
<tbody>
<tr>
<td>leadership and commitment of senior management</td>
<td>The support of managers involved in the Network</td>
<td>[33]</td>
</tr>
<tr>
<td>Culture</td>
<td>Culture of task and role</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Culture of network work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Culture of knowledge sharing in networks and centers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>culture of trust</td>
<td>[35], [36]</td>
</tr>
<tr>
<td></td>
<td>Culture of Philanthropy</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>cultures learning from failures</td>
<td>[34]</td>
</tr>
<tr>
<td>IT</td>
<td>Knowledge repositories</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Access to stored information from anywhere in the network in the shortest possible time.</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Scanning Tools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Network Portal</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Network Security</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>integrated Systems among Network Centers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Easy access to IT infrastructure</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Existence of information network for accessing information</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Existence of communication network for members to interact with each other within the network</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Existence of communications network for the entire supply chain</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Data analysis</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Customer knowledge bases</td>
<td>[37]</td>
</tr>
<tr>
<td></td>
<td>Using modern knowledge management tools like Web 2</td>
<td>[37]</td>
</tr>
<tr>
<td>Goals and Strategies</td>
<td>Intent / purpose / policies and strategies for knowledge management</td>
<td>[31]</td>
</tr>
<tr>
<td>Evaluation system</td>
<td>Creativity and Innovation</td>
<td>[34]</td>
</tr>
<tr>
<td>Organizational infrastructure</td>
<td>Managing knowledge transfer channels</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Flexible and dynamic organizational structure</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Internetwork markets for knowledge</td>
<td>[34]</td>
</tr>
<tr>
<td></td>
<td>Easy access to experts, specialists, and managers</td>
<td>[34]</td>
</tr>
</tbody>
</table>
Allocate space and places for dialogue and exchange between network members [34]

Existence of a distinct responsible person for managing relevant activities [34]

Existence of center in the network as a focal point for knowledge [34]

Coordinating the acquisition of knowledge outside the organization [34]

Coordinating activities and functions of knowledge management [34]

Knowledge management is associated with the values and beliefs and without an appropriate cultural context and based on trust it cannot be successfully implemented. Because the culture of each community includes the value system, it will affect people’s behavior. It is possible that in many cultures, given that "knowledge is power", this attitude leads to hoarding knowledge, so there must be a promotion of a culture of "knowledge distribution is also power" so that people share their own knowledge. Environment between network organization and inter-organization have many differences, the most notable differences are:

- Lack of a centralized management doing activities that entails two results:
  a. cross-departmental co-ordination is more difficult;
  b. Support for knowledge execution of Knowledge Management is very unstable.
- The difference between organizational culture
- The lack of uniform goals for implementation of knowledge management

So instead of addressing the procedural aspects of knowledge management such as exploration, storage, retrieval, and etc. we pay attention to cultural aspects of change. Naturally, the knowledge management implementation requires a change in manager’s and personnel’s mindset, how they work, and their work processes. Since penchant for change equals penchant for the implementation of knowledge management, change management has been taken in account in selecting the factors. In order to implement knowledge management, cultural readiness is necessary to change the mindset of all the people and processes and these changes are not possible unless all stakeholders feel the need for change and support its execution. So for the sake of diversity and extensiveness of subjects, instead of using just one factor under the title of culture, factors such as trust and altruism cultures are used. Of the cultural criteria that are involved in the success of knowledge management we can mention the culture of task and role, network work culture, culture of knowledge sharing, culture of trust as maintaining confidence between the two sides based on faith and behavior, culture of
friendship – intention of cooperation without having expectations for repay – culture of learning from failure to freely discuss about the problems and their roots.

IT provides solutions for knowledge-sharing and managing documents, processes, and procedures. These tools typically provide a secure, central location where employees, consumers, various departments, participants, and organization’s stakeholders can modify the information, share knowledge, help each other and also organization to make better decisions [34]

Technology in the form of appropriate tools and mechanisms can play important role especially in preserving the organization’s knowledge. In the stage prior to implementation of knowledge management IT is less important, but as implementation progresses, improvements in in this factor is strongly needed. This factor refers to software, hardware and networks required to implement knowledge management. It is necessary to create communication mechanisms between professionals to exchange, record and share Knowledge, increase the IT capacity and infrastructure, aided by advances in mobile network technologies and flexible software programming which help to set up software, hardware, and the communication network quickly. In this step, all the information within the system and knowledge saved, categorized, and encoded to be readily accessible when information is needed and also be ready for analysis. In this section classification, data security, and creation of protective walls are also done.

Human resource management also should take in account issues like communication/speaking/listening skills. Language is a vital factor in knowledge sharing which is responsible for describing, explaining, filtering, and organizing information from physical form into sense. T-Shape Skill is another skill that knowledge workers are better to have. This skill is based on two dimensions: depth (vertical) and width (horizontal), the person who has the skills is able to explore a different area of science and practice. They can strengthen the assets and knowledge and they are able to merge theoretical and practical knowledge together.

In the case of network organization, it is necessary to know that knowledge management will impose new wants to other parts including organizational structure, hence organizational structure should be flexible and dynamic enough to not restrict communications to teams, sections, or even organization and it make it possible for employees to communicate with the outside world [34].

The results and benefits of knowledge management in network organization are as follows:

1. Better decision making
2. Better customer management
3. Quick responses to key business issues
4. Improving staff skills
5. Increasing Productivity
6. Sharing the best way of doing things
7. Costs reduction
8. New ways of doing things
9. Increasing market share
10. Creating new business opportunities
11. Increasing employees’ motivation
12. Reducing errors
13. Reducing repetitions
14. Better response time
15. Improving the quality of products and services
16. Increasing customer satisfaction
17. Shorter courses
18. Increase the information content
19. Reduce the time needed to perform common tasks
20. Increase the information content
21. Improved teamwork (staff)
22. Accelerate the process
23. Reuse internal knowledge
24. Increased motivation (Employees)
25. Increase individual knowledge

9. Conclusions and practical recommendations:
According to the explanations given so far, the proposed framework for the implementation of knowledge management in network organization is presented in Figure 1. Then practical suggestions for better implementation of knowledge management in these organizations are...
9.1. Recommendation 1:
A successful implementation of knowledge management requires the care and active and comprehensive support of senior management and it should be considered prior to other factors. Managers and Corporate leaders must dedicate themselves to promote an organizational conceptual model among the staff which underscores the cooperation and Knowledge Sharing all over the knowledge (Knowledge Creating leadership). Also, managers should create such an environment within the network where knowledge creation and learning from each other among variety of individuals and entities become possible and it spreads. Most importantly, senior management should demonstrate its constant support and commitment to the inception and persevering of effort for knowledge management. Also it is recommended that they start a team to identify active individuals in the field of knowledge management and appreciate their efforts. Not only people should be encouraged for their knowledge sharing, but also for their utilization of other’s knowledge they should be valued. This can be done via annual promotion in a ceremony or using financial incentives. Having a vivid vision relative to the method of knowledge expansion among people can develop the effective knowledge leadership and administration within the university.

9.2. Recommendation 2:
Regarding the differences among organizational culture and ideal knowledge creating culture important aspects of a knowledge oriented and knowledge demanding culture includes characteristics and features such as trust, cooperation and honesty which should run within all levels of inter-network and intra-network managers and employees. In this context it is suggested that within the network we create an environment based on trust because the employees tend to share their knowledge to other members when they trust each other. Network organization increase awareness of people relating the advantages and benefits of knowledge management, employees and Managers should be informed about the changes and benefits of the implementation of knowledge management. In organization culture, creative and critical thinking government should be valued extremely, people who share knowledge should be honored and given a special place (material and spiritual), organization and management motivate learning and studying and encourage employees to study and gain more knowledge, and spirit of cooperation, participation in collaborative work should be strengthen among organization’s people.

9.3. Recommendation 3:
Due to the difference between existing knowledge ports and knowledge creating ports in organizations is suggested to establish knowledge centers within the main sectors of organization where a number of people with similar job responsibilities (without being a formal member of a team work) to create, share and utilize knowledge. In order to improve the effectiveness of these societies, organizations must provide them with necessary resources allow all people the opportunity to attend the society.

9.4. Recommendation 4:
Sources of knowledge should be identified and be used when required. There should be prepared places for conversation and exchange of knowledge between staff (chat Room, chat room) and managers. Also it is recommended to hold training workshops to improve the level of knowledge between networks. Organization should determine and collect the key knowledge workers to do
required actions and development of these human resources should be considered as a key element in the knowledge management.

**9.5. Recommendation 5:**

Considering the differences between existing organizational structure and knowledge based organizational structure, for success of network, management should believe in vital role of knowledge management within organizations and utilize knowledge management in key and vital affairs of organization and also in decision making. It is recommended that management gives sufficient attention to creation and development of technological infrastructure for implementation of knowledge management and also to intellectual capital and implementation of knowledge based strategies in developing plans. There should designated a place for knowledge management in a way that activities are assigned by specialty and knowledge usage is managed and peoples’ mental and doctrines are modified. To help the knowledge creation, forming formal and informal communication networks for exchange of hidden knowledge between individuals in all over the network, such as room for brainstorming, seminars and knowledge is recommended.

**9.6. Recommendation 6:**

It is recommended that appropriate hardware and software for knowledge management implementation be identified and it is assured that technology is in accordance with resources and also organization’s processes. Also according to the existing methodologies, the knowledge management framework in relation with the knowledge audit processes are proposed to identify the knowledge required for development and creation of a knowledge strategy for the network organization. For example, by asking some simple questions from the staff, the key areas of knowledge that are at the risk of loss are identified. Also it is recommended to establish knowledge networks with the outside network to absorb knowledge from outside the organization.

**9.7. Recommendation 7:**

It is recommended to provide an appropriate information system to store, transfer and exchange knowledge like: internet, intranet, extranet, groupware, and providing facilities for easier access to appropriate hardware for information sharing, instructing colleagues to create necessary skills for utilizing the abovementioned information systems.

**References:**

[28] A. M. Hadizadeh Moghadam, "Introducing a Model of Knowledge Management Success Factors-A Case of Bank Saderat Iran."

164


