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FACTORS AFFECTING THE ESTABLISHMENT OF KNOWLEDGE MANAGEMENT IN THE NATIONAL GAS COMPANY OF IRAN

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ABSTRACT

Severe and ongoing changes and developments in environmental conditions have faced today's organizations with many challenges. Organizations must be able to respond to changing conditions to at least survive and continue to grow. Knowledge management and its related strategy concepts are essential components for enterprises in order to promote the survival and maintain competitive advantage. The present study aims to examine the factors affecting the establishment of knowledge management in the National Gas Company of Iran. Four factors influencing knowledge management are examined including culture, IT, knowledge architecture and support systems in this company.

Keywords: Knowledge Management, Organizational Culture, Information Technology (IT), Knowledge Architecture, Support Systems

INTRODUCTION

Entering the knowledge era, organizations must be more adaptable and flexible to gain opportunities in a dynamic environment. The traditional perception of the organizational structure is failed in organizational development to meet new challenges and needs. The basic structural dimensions are incapable of completely description of knowledge-based organizations because informal relations have a key role in the organizations while the basic structures merely help to explain the formal structures.

Therefore, more comprehensive structural dimensions are required for the development and recognition of knowledge based organizations which can meet the new demands of the knowledge-based economy.

One of the important roles that can be attributed to knowledge management is to consider it as a methodology of change.

Knowledge management, on the one hand by the absorption of new knowledge into the system and on the other hand, with the effective knowledge management can play a significant role in the development and evolution of the organization. (Hales, 2001, 9-1)

Today, the conditions and competitive environment of the organizations are becoming more complex and quickly changing. That is, the changes are much faster the response rate and the ability to align with it in most organizations.

Using the terms such as knowledge task, knowledge workers, knowledge management and knowledge organizations, Peter Dracker has created new types of organizations where strength of mind speaks instead of arm strength (Mirsepasi, 1998, 75).

Theoretical bases and research model

Most experts share their knowledge in two dimensions: the explicit knowledge and tacit knowledge.

In most organizations, it is inevitable to use the staffs' tacit knowledge for their explicit knowledge to improve organizational performance. For this purpose, sufficient space has to provide for the transfer of knowledge and staffs' communication with one another since most of tacit knowledge is transferred through language, body and physical presentation of skills.

Nonaka (1994) suggests four modes of knowledge conversion:

1. From tacit to tacit knowledge (socialization): In this case, people are trying to share directly their tacit knowledge with others through interaction. It is noteworthy that the person is able to receive tacit knowledge without the use of language. For example, through face to face communication.

2. tacit knowledge into explicit knowledge (combination):
   The second option is for incorporating knowledge into explicit knowledge held by individuals from different sectors thus providing a new form. For example, information on a particular area is collect from different sectors and the departments and included in a single report.

3. Tacit knowledge into explicit knowledge (externalization): coding and encrypting the experience and insight in a way that it can be used by others. For example, tacit knowledge is changed into tangible form through discussions and questioning.

4. Explicit knowledge to tacit knowledge (internalization): when people are

institutionalized and share their tacit knowledge and then use it for developing their implicit knowledge.

According to Lynn (2000) New Public Management is a general theory about how the government could do things well, organize and provide services to the citizens. New Public Management does not deal with politics but considers the objectives of the parliament [macro] decisions. Basic claim of the New Public Management is that Governmental management is obsolete and New Public Management can replace it. New Public Management claims to be based on two considerations. First, the bureaucracy is not an effective way to manage the public sector. Second, according to the New Public Management extroversion is a proper answer to this question that what should be used instead of contract law and budget modification. Contracting by the contractor / auctions and rent as government and state administration is one of the features of the New Public Management aimed to reduce costs and increase efficiency.

In this way, more services are provided using lower prices and due to the contracts the high transparency of the agreement is achieved. All this is associated with the benefits of knowledge management but the losses should not be ignored. One of the major disadvantages is that trust has been reduced. Political democracy may be affected, resulting in increased transaction costs. This in itself would have an adverse effect on knowledge management because trust is the most important factor in the culture of knowledge sharing. However, the New Public Management experience in different countries although varied, shows that the benefits outweigh the disadvantages.

High number of personal computers and communication networks has led the organizations to get the new knowledge or maintain and use it to get the competitive advantage (Helal and Smith, 1998; Top ESCAP, 1996).

Using a computer network, even managers who are located in different geographical areas but have the same goals can also exchange their thoughts while using their innovative efforts or both. This process breaks spatial and temporal barriers. The network which consists of computer science and systems in addition to intelligent agents together can help to disseminate data, information, and knowledge. In the next section, information technology and strategic decision support systems are discussed as five main technical tools.

Knowledge Management

- Knowledge management is the creative, effective and efficient use of all available knowledge and

information for the benefit of customers and thus organization (McDonald, 2002).

- Knowledge management is to use individual and collective experience and knowledge through the process of knowledge creation, knowledge sharing, and use of technology in order to help achieve the goals of the organization (Baghaeenia, 2007).

- Knowledge management is the application of intellectual capital for the grant of organization to compete with peer organizations, as well as innovative responses to new challenges and leverage for action (Alagheband, 2013).

In general, knowledge management can be defined as the process of creation, approving, presentation, distribution and use of knowledge. Knowledge creation refers to the ability of organizations to provide new and useful ideas and solutions to the team. Organizations use different ways to create new concepts and reality through recreation and development of the past and present knowledge.

The role of culture and its relation to knowledge management

Organizational culture has a determinant role in the planning, investment and adoption of a new technology such as the knowledge management system since the culture of individuals and groups is based on the basic technology they use (Schein, 1992, p.921). Therefore, if a major technological change occurs in the organization, new values and norms should be taught and deep cultural assumptions should be redefined (Sharifizade and Boudlaiee, 2008, p. 123).

Success in implementing each strategy including knowledge management largely depends on the support of the organizational culture. Organizations strive to become a knowledge-based organization can be successful if the cultural characteristics necessary for the implementation of knowledge management exist. Knowledge can be effectively created and shared in organization if it is supported by the culture of the organization (Wang, Ahmed, 2003, p.12).

In addition to hardware and software, great attention should be given to cultural issues of knowledge management systems since a new technology must be accompanied by the organization's own culture (Hong, 2005). For the successful dissemination of knowledge management systems in the organizations, the fit between culture and knowledge management system is necessary (Sharifizade and Boudlaiee, 2008, p.126).

Several methods have been proposed for the conceptual definition of knowledge management processes. However, different

methods show that the majority of their use in practice is faced with many difficulties. However, some aspects of it can be applied in any organization or existing models processes can be integrated.

For example, these aspects in Munich's reference model of knowledge management include goal setting, evaluation, presentation, communication, creation and evaluation of knowledge (2001 al.24 Reinmann-Rotheier) or in the center of the IRC International Water and Sanitation include identification of required knowledge, access to the creation, sharing, implementation and evaluation of knowledge (M.Weggeman.2004).

The role of information technology in knowledge management

In evaluating the merits and achievements of organizations that effectively apply knowledge management, directors mention five advantages of knowledge management:

1. The rate of process

2. Sustainable advantage through continuous innovation

3. Identifying and adapting to changes

4. Continuity

5. Maintaining and developing intellectual property

With regard to the interests of knowledge it seems that the management of these knowledge capitals is a natural responsibility for operational management of the company. But in practice, knowledge management is often stated by information technology for two reasons:

1. Knowledge as the normal range of information and data.

2. Information Technology has created systems which process and transfer knowledge and possibly, the volunteer for running and maintaining the new system is needed (Rading, 2004, 85-83)

Components of information technology in knowledge management

IT has begun playing a major role in knowledge management as a normal diffusion to play their role in the management and transmission of data. Some of the information and knowledge management processes that can be used include: (Rading, 2004, 70-59)

Data processing:

This core function of IT provides the raw materials, information technology and administrative and operational data to knowledge management. The raw material changes to knowledge capital through a variety of transformation and strengthening the process of analysis. IT applications in this domain include:

- Business management
- Data Storage

Reporting:

Information technology not only provides information on the operational and business

but in addition to its operational needs, provides access to data for business and management purposes. With advances in data storage and data markets, IT has expanded reporting capabilities to enable users to easily and quickly have access to a wide range of data with no impacts and collisions to the infrastructure.

Reporting capabilities and functions of information technology has several elements, as follows:

- Distribution Report
- Customs report
- Case Questions
- Decision Support System
- Executive information systems
- Computer data processing
- Data storage warehouse and sales
- Data Mining
- Displaying

Networking:

Just the knowledge created as the result of communication has the greatest value for organization. The focus of information technology in knowledge management initiatives is related to the conversion of tacit knowledge into explicit knowledge, in a way that can be efficiently transmitted to others. Again, IT provides data communications capability and information to the host. The communications network infrastructure provides the foundation for advanced communication tools that are

designed to address the organizational knowledge.

IT networking components include:

- Host Networks
- Local Area N
- Wide Area N
- Intranet
- Extranet
- Internet

Knowledge Management Architecture

Architecture offers how to convert information into knowledge and knowledge management and development of transport and communication. Knowledge Management Architecture provides an outline of the technical infrastructure, i.e. the set of systems, technologies and communication technologies to support knowledge management framework in the organizations. Knowledge management should serve the mission and final strategy of the firm.

The IT architecture

Knowledge management architecture provides another subset of information technology.

Table 1: Architecture and Enterprise Architecture subsets

Business framework	Architecture of the strategic capability	IT framework
	Business architecture	
	Knowledge Architecture	
	Information Architecture	
	IT architecture	
	Subset of the IT	

architecture	

Knowledge management should be part of an organization's IT architecture. However, after experiencing the problems related to the legacy of a technology that was incompatible with other technologies, managers today are probably trying to build a knowledge management system that is completely separate from the IT companies that are not supported.

Technical infrastructure of knowledge management through knowledge architecture

Managers working by knowledge architecture can develop technical infrastructure, knowledge management (a set of systems, technologies, networks, agreements, and measures necessary to support the strategy of the organization). The first step in the development of technologies and systems infrastructure is that the technical knowledge should be available to accountancy. After this step is completed, the system should be analyzed in terms of the potential to produce knowledge (knowledge that may conquer, grow, create, convert or transfer).

Support systems:

Senior management commitment and support:

Obviously, the success of the program, techniques, new approaches or any project depends upon the commitment and support of senior management. The implementation of knowledge management in organizations need funding, infrastructure and other resources and senior management is based on the goals and strategies and the priority that is assigned to each of them to allocate resources. According to research on the causes of the failure to implement the plans and programs of the organization, the results show that one of the main factors are the lack of commitment and support from senior management.

Top management can be achieved through a variety of organizations including: active participation in the various stages of the implementation of knowledge management, the impact of the level of knowledge in the performance evaluation system, promote, reward, reward and punishment; audit practice at the end of each fiscal period and other strategies that are appropriate to the situation and the specific circumstances of each organization, show the commitment and practical support to the management of knowledge and involvement in solving problems. Appropriate combinations of information technology and decision support systems and intelligent activities make organizations able to set a strong competitive conduct.

Decision support system for management decision making and information technology are provided to support

processing. Therefore, organizations need a solid base for strategic decisions, achieving higher levels of organizational performance and the creation of effective quality management performance gain.

Indicators support systems:

1. Select the appropriate members of management team

2. Proper planning and forecasting for the implementation of knowledge management

3. allocation of a separate budget for the implementation of knowledge management

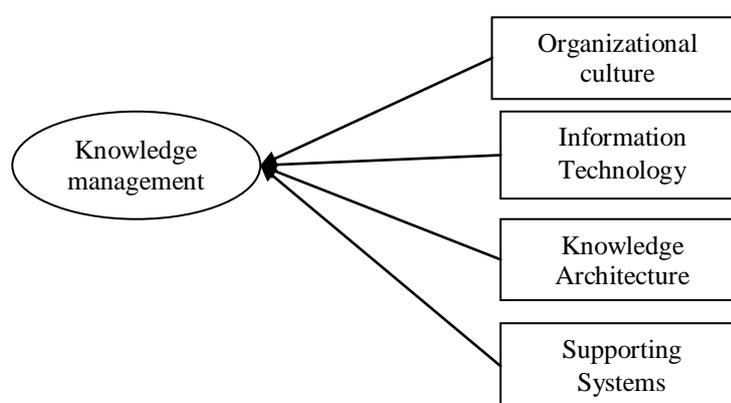4. Communicate in organization to exchange knowledge

Research Model

Figure 1: Research Model

Background

"The knowledge management maturity model in Petrochemical Research and Technology Company" articles 1477 in Knowledge Management Conference

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The company implemented a knowledge management model derived from extensive field studies in Iranian organizations and locally affected by three areas of "organizational structure", " organizational culture" and "information technology". The paper discussed the attempts by the Petrochemical Research and Technology Company toward the realization of the new Knowledge Center which is a center to collect, assess, classify and categorize all knowledge produced in large organizations.

This paper aimed to propose a knowledge management maturity model derived from research, and interviewing with the local experts and evaluating knowledge management in the company using the proposed model.

According to the conducted research, the company is in the third stage of knowledge management maturity. That is, there is a high level of knowledge and knowledge management and its abilities are well known.

There is a problem in the implementation of knowledge management that is creating a culture of knowledge sharing. Solving this problem is related to the development of motivational systems. Thus, the incentive programs should be strengthened.

"Assessment of Knowledge Management Strategies in Higher Education: A Case Study of Persian Gulf"

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In recent years, emerging information and communication technologies had innovative implications for institutions including higher education. Universities and higher education institutions are seeking to achieve sustainable competitive advantage and in line with the university's strategic knowledge for strategic purposes, have used innovations, philosophies, strategies and techniques that re used in private and commercial sectors.

One of the innovative applications of knowledge management is to work an effective tool for creating, transferring or sharing, application and evaluation of students at the university. This paper evaluates knowledge management strategies in the context of higher education. This descriptive survey investigated the views of faculty in relation to the quality of the development and implementation of knowledge management strategies in a faculty of engineering. The participants of the study include all the members of the Faculty of Engineering at the University of Persian Gulf. Descriptive statistics and inferential statistics were used to analyze the research questions and hypotheses. Research findings showed that faculty is not in an appropriate condition regarding the leadership Strategies, ICT and culture according to the opinions of the faculty members.

"Providing a guide for the implementation of knowledge management with data mining approach"

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The purpose of this paper is to provide a framework for the discovery and application of knowledge management in the organization's marketing department.

For this work, the authors suggest, primarily by customer profiles, marketing database created

And then by applying data mining, knowledge hidden in these databases are integrated in a data storage system, extract and then studied how to manage it in the fall. The purpose of this paper is to provide a framework for the discovery and application of knowledge management in the organization's marketing department. For this purpose, the authors suggest primarily creating marketing database by customer profiles and then by applying data mining, knowledge hidden in these databases are integrated in and extracted from a data storage system. Then the management of organization can be studied. The authors used the survey results taken from aggregating and categorizing of previous researchers' comments to offer two models one inside the other. In the first model, the production process by means of data mining is presented in the form of a flowchart and in the second model (the final one) a five-step guide has been presented to knowledge management produced in the

previous model. This model allows the manager to manage the administrative and technological issues in addition to human problems in the implementation of knowledge management faced by the department.

Providing a framework for determining the role of knowledge management in crisis management

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During the crisis, companies spent a lot of cost and time and many people get different experiences. Experience in managing the crisis and recording the experiences of the students made the organizations see their mistakes and start learning to enterprise-wide business division and facilitate the formalization of knowledge.

Therefore, knowledge management can play an important role in crisis management. Organizations need different kinds of knowledge and knowledge management strategies are used differently to get the best results in the time of crisis. In addition, the crisis management to adapt to changes and to pass the problem and fix the damage caused by the environment with the new circumstances requires special features

which the managers face many problems to respond to them.

Knowledge management is one of the key features that can help leaders and managers in response to the changes. The research is focused on how organizations can apply useful knowledge management strategies based on their knowledge needs to apply at the time of crisis.

Research objectives

Theoretical research objectives

The overall objective of this study is to demonstrate the need to check the status of the basic factors such as organizational culture, IT support systems and architectural knowledge to participate in the successful implementation of knowledge management in the company which leads to improved performance and ultimately the survival of the company in the competitive world.

Applied research objectives can be stated as follows:

- Studying the factors affecting the establishment of knowledge management in the National Gas Company of Iran
- Studying the cultural condition for in the National Gas Company of Iran to establish Knowledge Management system
- Studying the knowledge architecture condition for in the National Gas

Company of Iran to establish Knowledge Management system

- Studying the support Systems for in the National Gas Company of Iran to establish Knowledge Management system
- Studying the information technology condition for in the National Gas Company of Iran to establish Knowledge Management system

Research hypotheses or questions

A) There is a significant relationship between organizational culture and knowledge management.

B) Knowledge architecture has an effective role in knowledge management

C) Supporting systems are directly associated with knowledge management system.

D) The information technology infrastructure is directly related to knowledge management.

Research domain:

Spatial domain (target population)

The aim is to illustrate the underlying factors and provide some suggestions for the National Gas Company of Iran for strengthening the implementation of knowledge management in order to fulfill the mission and achieve a rightful place in Iran.

Geographic scope of the study

The final survey questionnaire was distributed in the fall and winter of 2010.

Thematic scope of the study:

The study aimed to investigate the factors affecting the establishment of knowledge management in the National Gas Company of Iran.

RESEARCH METHODOLOGY

The study included all employees and managers in the IT sector of the National Gas Company. Cochran formula was used to obtain the sample size of 80 participants.

Before the final implementation, 40 individuals (20 staff members, 20 managers) were randomly selected to complete the questionnaire. After collecting the questionnaires Cronbach's alpha coefficient was calculated using the SPSS version. The Cronbach's alpha coefficient was 9329% for the variable of organizational culture, 7617% for knowledge architecture, 9247% for support systems and 8535% for IT. The Cronbach's alpha coefficient was 93% for the questionnaire in total which indicated the stability and internal consistency of the questionnaire. The present study was practical in terms of purpose, cross-correlational and causal in terms of data collection.

Data analysis

Hypothesis (1)

Based on the results of the measurement of the implementation of knowledge management in the National Gas Company of Iran, 2/34% of managers and 5/30% of staff rated the implementation of knowledge management in the National Gas Company (review existing cultural infrastructure) as average. This indicates insufficient knowledge of the cultural infrastructure of the National Gas Company.

Student t-test was used to compare the views of managers and staff about the cultural infrastructure of the National Gas Company.

Comparison of the responses of managers and employees (t= 2.52, df= 168) and comparing it with the distribution table t (t=1.645) in 5% p-value to 95% confidence level, it can be concluded that the hypothesis that "there is no significant relationship between organizational culture and knowledge management was rejected at the 5% significance level and the first hypothesis assuming that there is a significant relationship between organizational culture and knowledge management is approved. The result indicated that 2/34% of managers and 5/30% of staff rated the implementation of knowledge management in the National Gas Company (review existing cultural infrastructure) as average but the staff have emphasized that cultural infrastructure was at low and very low compared to the managers.

Hypothesis (2)

Based on the results of the measurement of the implementation of knowledge management in the National Gas Company of Iran, 46% of managers and 44.8% of staff rated the implementation of knowledge management in the National Gas Company (review existing information technology infrastructure) as average. This indicates insufficient knowledge of the information technology infrastructure of the National Gas Company.

Student t-test was used to compare the views of managers and staff about the information technology infrastructure of the National Gas Company.

Comparison of the responses of managers and employees (t= 2.28, df= 168) and comparing it with the distribution table t (t=1.645) in 5% p-value to 95% confidence level, it can be concluded that the hypothesis that Knowledge architecture has no effective role in knowledge management was rejected at the 5% significance level and the second hypothesis assuming that Knowledge architecture has an effective role in knowledge management is approved. The result indicated 46% of managers and 44.8% of staff rated the implementation of knowledge management in the National Gas Company (review existing information technology infrastructure) as average.

Hypothesis (3)

Based on the results of the measurement of the implementation of knowledge management in the National Gas Company of Iran, 35% of managers and 41.3% of staff rated the implementation of knowledge management in the National Gas Company (review existing knowledge architecture infrastructures) as average. This indicates insufficient knowledge of the knowledge architecture infrastructure of the National Gas Company.

Student t-test was used to compare the views of managers and staff about the knowledge architecture infrastructure of the National Gas Company.

Comparison of the responses of managers and employees (t= 2.34, df= 168) and comparing it with the distribution table t (t=1.645) in 5% p-value to 95% confidence level, it can be concluded that the hypothesis that information technology infrastructure is not related to the knowledge management was rejected at the 5% significance level and the third hypothesis assuming that information technology infrastructure is related to the knowledge management is approved. The result indicated 35% of managers and 41.3% of staff rated the implementation of knowledge management in the National Gas Company (review existing knowledge architecture infrastructures) as average.

Hypothesis (4)

Based on the results of the measurement of the implementation of knowledge management in the National Gas Company of Iran, 46.1% of managers and 37.3% of staff rated the implementation of knowledge management in the National Gas Company (review the support systems of knowledge management) as average nd 23.3% of managers and 22.1% of staff rated it as low . This indicates insufficient knowledge of the support systems of knowledge management in the National Gas Company.

Student t-test was used to compare the views of managers and staff about the support systems of knowledge management of the National Gas Company.

Table 2 : Comparison of the responses about cultural infrastructure

	Managers	Staff
Mean	*29/51*	*26/70*
Standard Deviation	*7/28*	*8/94*
Variance	*53/1*	*80/02*
t	*2/25*	*=1/2F*
df	*168*	*=0/27P*

Table 3: Comparison of the responses about information technology infrastructure

	Managers	Staff
Mean	29/8	29/54
Standard Deviation	5/51	7/14
t	2/28	**F** = 9/59
df	168	**P** =0/002

Table 4: Comparison of the responses about knowledge architecture infrastructure

	Managers	Staff
Mean	23/43	26/67
Standard Deviation	10/55	78/08
t	2/34	**F** = 5/53
df	168	**P** = 0/02

Table 5: Comparison of the responses about the support systems of knowledge management

	Managers	Staff
Mean	26/11	27/65
Standard Deviation	9/26	8/32
t	1/072	**F** = 0/008
df	168	**P**= 0/928

Comparison of the responses of managers and employees (t= 1.072, df= 168) and comparing it with the distribution table t (t=1.645) in 5% p-value to 95% confidence level, it can be concluded that the hypothesis Supporting systems are not directly associated with knowledge management system was rejected at the 5% significance level. Further, regarding the scores and their frequency it can be concluded that 46.1% of managers and 37.3% of staff rated the implementation of

knowledge management in the National Gas Company (review the support systems of knowledge management) as average and 23.3% of managers and 22.1% of staff rated it as low. This indicates insufficient knowledge of the support systems of knowledge management in the National Gas Company

CONCLUSION

1. There is a significant relationship between organizational culture and knowledge management. According to the results, 2/34% of managers and 5/30% of staff rated the implementation of knowledge management in the National Gas Company (review existing cultural infrastructure) as average but the staff have emphasized that cultural infrastructure was at low and very low compared to the managers. This indicates insufficient knowledge of the cultural infrastructure of the National Gas Company.

2. Knowledge architecture has an effective role in knowledge management is approved. The result indicated 46% of managers and 44.8% of staff rated the implementation of knowledge management in the National Gas Company (review existing information technology

infrastructure) as average. This indicates insufficient knowledge of the information technology infrastructure of the National Gas Company.

3. Information technology infrastructure is related to the knowledge management is approved. The result indicated 35% of managers and 41.3% of staff rated the implementation of knowledge management in the National Gas Company (review existing knowledge architecture infrastructures) as average. This indicates insufficient knowledge of the knowledge architecture infrastructure of the National Gas Company

4. Supporting systems are directly associated with knowledge management system. Regarding the scores and their frequency it can be concluded that 46.1% of managers and 37.3% of staff rated the implementation of knowledge management in the National Gas Company (review the support systems of knowledge management) as average. This indicates insufficient knowledge of the support systems of knowledge

management in the National Gas Company.

Suggestions

Today, knowledge management is not only economic pressure but important aspect of knowledge management. Today the emphasis in knowledge management is one that individuals have the power to think and analyze issues and more people have rational functions. In addition, the staff should have their intellectual freedom to be able to comment on their work. These findings have not been instantly taken to the knowledge management but they have been found due to the long experience of the 1980s afterward (Harihan, 2002).

Emergence of new issues in management as a downsizing strategy leads to the loss of important knowledge since employees leave work and take their aggregated knowledge over the years with them.

Over time, the organizations have realized that they have lost many years of knowledge and experience and are now determined to prevent repeating the same experience. This prompted to adopt company's knowledge management strategy in an effort to preserve the knowledge of the workers for the future benefit (Majdam, 2000, 40).

According to the results, some suggestions and solutions are provided for the implementation and strengthening of

Knowledge Management at National Gas Company of Iran.

Knowledge creation and strengthening of infrastructure and organizational culture:

- Institutionalizing a culture of knowledge sharing in the company
- Governance of the critical thinking in organizational culture as a value
- Enhancing the organizational knowledge sharing and exchange of knowledge and in the Company
- Respecting the physical and spiritual status for those sharing knowledge, strengthening their spirit of cooperation, partnership and teamwork among individuals

Creation and strengthening of IT infrastructure:

- Providing appropriate information systems for storage, transfer, exchange of knowledge, such as the Internet, extranet, and....
- Providing access to the software necessary for sharing information
- Making the database and required addresses available for all the users

Development of knowledge architecture infrastructure:

- Trying to record information about the capabilities, knowledge and experience in human resources

- Emphasis on organizing work experience in the use of knowledge
- Using knowledge of the company's research and development centers for permanent filtration
- Approving a detailed record of successful projects and how to use it and unsuccessful experiences

Establish and strengthen support systems

- Management support for the development and transfer of knowledge and allocation of adequate resources to this
- Sufficient attention to the development of infrastructure such as knowledge base, the scientific community, and scientific conference....
- Strengthening the company's information center staff

Practical suggestions

1. It is recommended to the managers to do greater efforts to establish an appropriate organizational culture to provide organizational climate suitable
2. All the staffs change themselves voluntarily and share their knowledge with other colleagues. The consultation meetings should also be held to exchange information.

3. The administrative and educational sites for expression and bug fixes were made so that all the centers can communicate with each other and get informed of the information and new working practices of others and as far as possible avoid repetition of the wrong paths and use of each other's experiences.
4. The information needed for the proper information technology including computer networks, intranets and databases suitable for the sharing and exchange of information should be provided.
5. the owners of knowledge related to the company should be invited and communicate with their employees
6. Encouragement and rewards for innovation and effective knowledge culture
7. coherent connection with research and development centers in universities
8. Use the experienced people knowledge to actively exchange knowledge with other foreign and domestic companies
9. Detailed analysis of the procedures used by competitors regularly
10. Seminars within the company to explain the importance of knowledge management and its infrastructure

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