The Study of Relationship between Knowledge Management and Organizational Culture indicators

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Present study goal has been relationship between knowledge management and organizational culture indicators in Danison view in Guilan Payam Noor Universities. Research method has been analytical-descriptive. Statistical community of this research determined 274 formal scientific board members and all the Guilan Payam Noor universities experts in 2009-2010 that 67 ones were of scientific board members and 207 experts. Mentioned case determined 160 individuals by using sampling formula and because studying community consisted of 2 different groups, so to sample has used classical random sampling. Knowledge management variable evaluation tool has been a questionnaire including 18 questions on Likert 5 items spectrum and to evaluate current organizational culture criteria in Guilan Payam Noor university, used a questionnaire in 60 items five options in Likert spectrum that has used scoring method to evaluate responses. Data analyzing in this study, has done by using descriptive and inclusive statistics. To study distributions normality has used Komogorph-Smirnooph test and to study research hypothesis meaningfulness has used Peirson convergence test for normal distribution. Research results shows that there is a meaningful relationship between knowledge management and organizational culture indicators means working, adapting, integration and mission in Guilan Payam Noor universities. Therefore, original hypothesis and 4 marginal hypothesis of research have confirmed on 99%.

JEL Codes: Knowledge management, Organizational culture, Involvement, Adapting, Integration, Mission

1. Introduction

Todays organizations to use knowledge should balance in activities related to knowledge management quickly. Generally such balancing needs organization culture and technology changes. Also organizations to lead individual knowledge should create an environment for communication, transferring and knowledge exchange among members. To expand knowledge should lead any knowledge to exchangeable expanding among performances. In summary knowledge management refers to communication culture and business processes change to make possible information exchange (Nonaka and Takeuchi, 1998). In dynamic environment humans are the most important organizational element. This activity needs organizational culture affects on workers behaviour (Sharifzadeh and Kazemi,1998). Also organizational culture is knowledge management driver dimension that creativity and innovation is value for that (Moradzadeh, 2006).

Environmental culture concept serves as an effective agent in organization function. Suitable work culture leads to organizational obligation, moral raising, character performance and generally higher producability. So must pay attention to organizational

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culture function and through this response to some managers questions and ambiguities that couldn't receive to desired conditions.

Regarding to different definitions of organizational culture and its function to solve problems needs a powerful organizational culture to change organizations (Sharifzade and Kazemi, 1998). A powerful culture follows through basic organization values by individuals and are common among organization members (Rabins, 2005). Regarding to mentioned issues successful organizations promote it widely through organization and show quickly as technologies, services and new products. First step is that individuals and this knowledge owners support this process that needs supportive culture common through the world (Zarei Matin, 1995).

Reward system affects on the knowledge management as a cultural agent including performance evaluating system. So reward system helps organization individuals to create and promote knowledge (Holowzki, 2002). Knowledge in organization is known as a strategic property that goes in line organization goals. Also it creates by individuals and exchanges among individuals, so they are important cultural agent.

Payam Noor University relying to organization workers encourages them to realize, understand and introduce new knowings and ideas that workers behaviour is affected by organizational culture. Despite of wide literature in term of knowledge management and organizational culture, done studies have been very little on the relationship between them. The main question of this study is that how extend relationship between knowledge management and organizational culture indicators in Guilan Payam Noor Universities?

Research Hypothesis

There is a relationship between knowledge management and organizational culture indicators in Denison view in Guilan Payam Noor universities.
Lateral hypothesis:

  1. There is a relationship between knowledge management and Involvement.
  2. There is a relationship between knowledge management and adaptation.
  3. There is a relationship between knowledge management and integration.
  4. There is a relationship between knowledge management and mission.

2. Literature Review

In 1979, Swedish accountant called Karl Erik Sievby as knowledge management establisher faced a great question. Accountancy notebooks indicated just one crone value. In this time he found that company balance sheet indicates physical property value including several tables and type matching. Siewie and others found that it is thought property/ intangible property besides tangible properties (Afrazeh, 2005). Knowledge management has root in taken quality management (TQM), business process reengineering (BPR), information substitutions (IS), and human resources management (HR). Knowledge management in early 1990's entered organizational issues. In 1965 Marshall said that the main part of property includes knowledge. He believes that knowledge is the most powerful production motor. Kuhn emphasizes that knowledge is a group common property initially. In 1972 Habermas refers to this point that knowledge is on the base of will and sometimes on human unconscious acts.

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Historically, we could separate 3 generations of knowledge management. 1990 – 1995 is known as first generation. During that many acts refer to knowledge management definition, knowledge management potential advantages study for business in knowledge leading and saving.

Second generation appeared around 1996. During that many organizations served new posts for knowledge management such as knowledge senior manager. During this generation in knowledge management studies there were different knowledge definitions. Third generation now is appearing by new methods and results. It emphasizes on the junction between knowing and act.

Knowledge management evolutional way:

Knowledge is cultural and social and organizational knowledge just could realize through activity and organizational methods change. Table (1) gives some important researches on knowledge management that use as references today.

Table 1: A case of the most important researches on knowledge management

Researchers	Topics
Polyani (1996): Nonaka & Takeuchi (1995)	Mental and visual difference
Tsoukas (1996)	Classified knowledge
Wig (1993): Liebowitz (1999)	Knowledge bases
Holsapple & Joshi (1997); Rubenstein et al. (2001)	Knowledge management models and frames
Davenport et al. (1998)	Knowledge management successful projects
Fowler (2000); Liebowitz (2001)	Knowledge management and artificial intelligence
Courtney (2001); Bolloju et al. (2001)	Knowledge management and decision supporting
Liao (2003); Kakabades et al. (2003)	Knowledge management researches
Tyndale (2002)	Knowledge management softwares
McAdam & Reid (2001); Wiekert & Herschel (2001)	Knowledge management and small economic forms
Rowley (2000); Metaxiotis & Psarras (2003)	Knowledge management and high education
Weber et al. (2002)	Knowledge management standards

2.1 Data, Information and Knowledge Comparing

In Retiz believing facts data are raw numbers and instructions that human could realize and interpret them by computer help, they form knowledge Data are complete exchanges reflecting that these elements save and manage in data stations. For example 12 and 100110 are data cases. Any data may explain time, rate, cost, size, a month of year and etc. Information are summarized data that realize simply. We could make decision by information study. Knowledge is a complex of data and information that obtains through laws, processes and functions and experience. Knowledge there is inside people and is valuable due to its functionality in comparing to data and information. Knowledge could

use in decision making on methods, competitors, costumers, distribution channels, production and service life cycles. Hikns explains these three terms in another form. Data is raw and meaningless itself. Information is from data collection that becomes meaningful through relation with each other and could response to questions such as where, when, what and who.

So above topics could define as following:
- Data: are signs of how and reality quantity.
- Information: information creates when human gives meaning to data. Most of them appear as data ordered appearance.
- Knowledge: is individual, organizational and group ability that individual could do a duty through it.

2.2 Organizational Culture

Organizational culture refers to values, ideas and behaviours model learned past beside experience that develops during organizations history. An organization culture including organization environment macro processes and determines such culture limit by these processes. Martin conclude that culture introduces deep people needs to concept meaningful experiences. Regarding to university as a human – centered institution to train skillful and powerful human force, trains future generation to success organization. To empower organizational culture first should study current culture that the most new and efficient organizational culture realizing models (Denison model) could help to reach this goal.

Organizational culture relying to Denison model:

In this study Denison model (2000) has used. This model has planned by Denison and through many studies and experiences. He said that organizational culture includes 4 main properties. These are such as involvement, integration, adaptation and mission. Any of them includes 3 management activity indicators that shows in figure (1).

Figure (1): Denison organizational culture model (source: Denison 2000)

Show in figure (1)
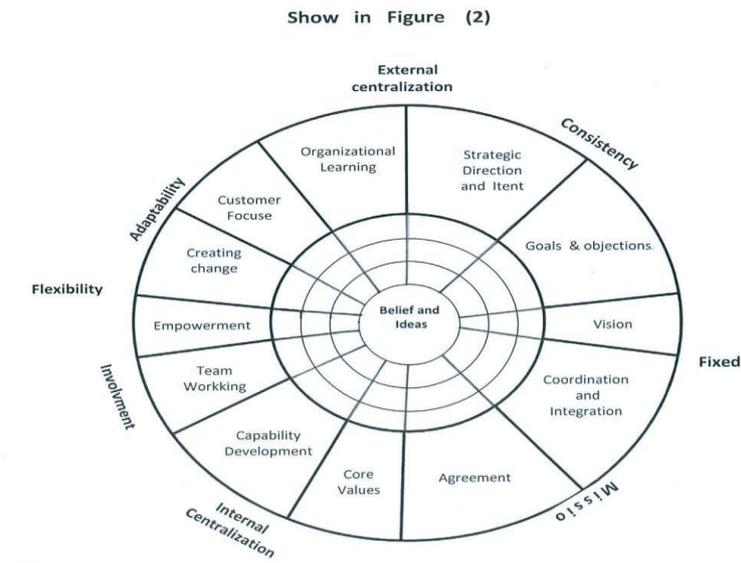
Involvement (companion): Means that organization encourages workers companion in organizational activities. Effective organizations empower their workers and their work relations directly to organization goals. Companion property assesses with 3 indicators including empowering, team work and workers abilities development:

A – Empowering: Empowered individuals have empower, creativity and their task control ability. This creates owning and responsibility sense in organization.
B – Team work: In organization values group work for common goals as workers feel that are responsive in their work place as managers. They rely on groups for works doing.
C – Abilities development: organization to supply needs and remaining in competency develops workers skills.

Integration: is such as values and systems that are a powerful culture base and have high effect. Studies indicate that effective organizations are stable and integrated and workers behaviour originates of basical values. Such organizations have a powerful culture. This property evaluates by 3 indicators such as adaptation and integration, agreement, basical values.

A – Basical values: Organization members are common in a set of values.
B – Agreement: Organization members could agree on important differences. This agreement includes agreement on low levels and ability to creat agreement on the other levels.
C – Adaptation and integration: organizational units with different performances could work with each other well to reach common goals.

Adaptability: It means regarding to work place necessities in activities and include customs. Integrated organizations change hardly so inside interaction and outside adaptability could serve as organization advantage. This property studies by three indicators including changing, customer – centring and organizational learning:

A – Creating change: Organization could create ways to supply change needs and know institution environment, response to current stimuli.

B – Customer – Centring: Organization realizes customers and responses them and supplies future. Customer centring shows a grade that organizations lead to satisfy customers.

C – Organizational learning: Evaluates environmental signs rate that organizations receive, interpret them and create opportunities to encourage creativity, knowledge way and abilities development.

Mission: includes long – term directions definition and determining for organization. The most important organizational culture property is mission. Successful organizations have a clear realization of their goals and direction. In this status powerful leader indicates organization view and creates a culture to supply this view. Mission includes three indicators view, goals and finally strategic direction.

A – Strategic direction: Clear strategic wills form organizational goals and any person participates in that part.

B – Goals: Goals combine with mission strategy and organization view and determines individuals work direction.

C – View: Organization has a common view of future, introduces basic value, identifies this direction.

From organizational culture models could refer to Ochi (1981), Piters and Waterman (1980), Hofested (1994), Baron and Walters (1982), Parsons (1983), Kert Loin (1992). One of the organizational culture models helps is that these models determine different elements of an organizational culture. Danport and Prosak studies (1998) introduce 8 criteria to evaluate organizations successful to implement knowledge management projects. These criteria study determined that organizational culture is regarded as knowledge management success evaluation basic indicator in organizations. Dilang and Fai (2000) studies indicate that organizational culture could affect on the knowledge management through four ways:

1. Function that organizational culture plays on knowledge identity and its importance for organization management.
2. function that culture plays to create relationship between individuals and organization knowledge.
3. Cultural models that determine how knowledge must use in special status.
4. Processes that by them create knowledge and spread through the organization.

Organization success to impellent any strategy such as knowledge management depends on organizational culture support. Organizations try to convert to knowledge – centered organization is successful when needed cultural properties there are for knowledge management. Past that there is a relationship between knowledge management and organizational culture. In current study researcher tries to study relationship between knowledge management and Denison organizational culture indicators in Guilan Payam Noor Universities.

3. The Methodology and Model

This research is descriptive that its goal is describing conditions by studying phenomena. This research is on the base of convergence researches. Statistical community is 274

formal board members and all of the Guilan Payam Noor universities experts in 2009 – 2010 that 67 ones are board members and 207 experts. Guilan Payam Noor universities include Rasht, Talesh, Astara, Anzali, Somesara, Fooman, Astaneh, Lahijan, Langrud, Manjil, Roodsar, Rezvanshahr, Khoshkbijar, Amlash, Shaft, and Masal. In this research has used following sampling formula to determine case mass and total case is 160 ones.

$$ n = \frac{N.p.q.t^2}{(N-1).d^2 + p.q.t^2} = \frac{274(0.5)(0.5)(1.96)^2}{273(0.05)^2 + (0.5)(0.5)(1.96)^2} = \frac{265.4}{1.65} = 160 $$

n = case mass   N = society mass
p = 0.5 success possibility   q = 0.5 unsuccessful possibility
t = 1.96 d^2 = 0.05

Studying community includes 2 groups, so in this research has used classical random sampling. To select each class case individuals, has done randomly. Questionnaire is data collecting tool including 18 questions on Likert 5 grades and has used 3 questions for any indicator. In Guilan Payam Noor university used 60 items Questionaire on Likert spectrum. In this study has used Kron bach alpha to obtain organizational culture and knowledge management questionnaire conclusion. So before final implementation 30 cases selected randomly, then gave them mentioned questionnaire and calculated Kronbach by spss software that obtained 87% for knowledge management and 93% for organizational culture that shows questionnaire stability and inside integration.

4. The Findings

In present study there are 1 main hypothesis and 4 lateral hypothesis. To study distributions normalities has used colmogorph – smirnoph test. Table (2) indicates this test result. Knowledge management and organizational culture have normal distribution.

Table 2: Comoloph – Smirnoph test results to study distributions normality

Variable	N	K – S rate	Prate	Normal result/ unnormal distribution
Knowledge management	160	1/200	0	Normal
Normal Organizational culture	160	1/061	0	Normal
Involvement	160	1/705	0	Normal
Adaptation	160	1/340	0	Normal
Integration	160	1/339	0	Normal
Mission	160	1/078	0	Normal

Regarding to distribution normality in both of scales and microscales of organizational culture could use parametric statistic methods. To study present hypothesis uses Pierson convergence method.

Table 3: Pierson convergence test for all hypothesis

Hypothsis	N	Pierson R rate	Prate
Main H	160	%47	0
First lateral H	160	%43	0
Second lateral H	160	%49	0
Third lateral H	160	%44	0
Fourth lateral H	160	%52	0

5. Summary and Conclusions

In this study knowledge management is a process that helps organizations to reach organization goals and control important information. And organizational culture is a collection of values, believes and though ways that organization members have common sides in that. To evaluate organizational culture used 4 dimensions Denison model and 60 questions. They are Involvement, adaptation, integration and mission. To study this hypothesis used Pierson convergence test and obtained results confirm this hypothesis. Main hypothesis confirmed 0.99 possibility about relationship between knowledge management and organizational culture indicators in Guilan Payam Noor universities. In organizational culture questionnaire due to total mean of Denison organizational culture (3.41) could say that current organizational culture status in Guilan Payam Noor universities is higher than average level. University is ready to supply today customers needs. So regarding to these results could say that desired society is in high level of adaptation. Integration, agreement and basic values are in high level and show that organization has good goals. Individuals pay attention to others speaking and there is much integration and agreement among individuals. In a result regarding to these results could say that society is an high level of integration. Strategic goal, objectives and view are on high level. Often center on long – term plan. In knowledge management questionnaire due to total mean knowledge management (3.44) could say that Guilan Payam Noor universities knowledge management status is on high level also regarding to frequency and selecting percent each of microscales such as knowledge, development and improvement, propagation, productability, save and knowledge management need are as goals and view clarity is high. University desired knowledge is transformable through training periods, seminars, and also communication channels to exchange views up to bottom and inverse. Organization desired knowledge saves as evidenced and written. Evaluation goals for workers in average or high level reveal clearly and organization though properties are regarded very much. Finally this research results indicate that 4 dimensions of Denison organizational culture including Involvement, adaptation, integration and mission have a positive and powerful relationship with knowledge management and Guilan Payam Noor universities regarding to Denison model there are in four dimensions and inside and out side concerns are stable.

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