



## **FULL LENGTH ARTICLE**

# **An investigation of the relationship between organizational culture and the implementation of knowledge management from the perspective of the school principals of the city of Marand during the Iranian school year of 2012-2013**

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### **ABSTRACT**

The present research aims to investigate the relationship between organizational culture and the implementation of knowledge management from the perspective of the school principals of the city of Marand, Iran, working at the three Iranian educational levels during the school year of 2012-2013.

This is an applied research in terms of purpose, and a descriptive-survey in terms of data collection method. The statistical population includes the principals of every elementary school, middle school, and high school in the city of Marand, which in total comprises 80 individuals. Using Krejcie and Morgan's table and through the stratified random sampling technique, 66 of the total 80 school principals were selected as the sample of the study. To collect data, the questionnaires of Denison Organizational Culture Survey (DOCS) and Lawson's Knowledge Management were used. Validity of the questionnaires was supported by the opinion of the experts in the field. Reliability was achieved through calculating Chronbach's alpha, with the resulting values of 89% for *Organizational Culture* and 87% for *Knowledge Management*. Data analysis was performed using descriptive statistics (including mean, standard deviation, variance) and inferential statistics (including Pearson's correlation test, stepwise regression, multivariate analysis of variance, Friedman test) methods. The resulted data were analyzed using the SPSS software.

### **INTRODUCTION**

According to Peter Drucker, the organization of the 21<sup>st</sup> century's is not based on money, capital, nor even technology, but on knowledge (Drucker, 2000, p. 11). Noticing the constant rise in competition levels, human resource expenses, instability of the work force, as well as the decline in the number of quality knowledge workers, organizations are increasingly convinced that they need to utilize more effectively their intellectual assets, that is, the knowledge and expertise stored within the human force (Alavi & Davenport & prusak, 1993 inlawson, 2003, laidner, 2001).

Today's ever-changing world requires organizations to seek new devices that can assist them to survive, one of which is knowledge management. Knowledge management is a process that helps organizations in collecting, selecting, organizing, and distributing important information. It is a specialty that is crucial to problem solving, dynamic learning, and decision making (Arbab-shirani, 2002).

Today, organizations consider intangible and intellectual assets, which are also called "knowledge", to be of pivotal importance (Afrazeh, 2005, p. 6).

Organizational culture impacts all aspects of organizations, such as development of goals and strategies, individual behaviors, organizational performance, job satisfaction and motivation, creativity and innovation, involvement of employees in organizational affairs, and the like. Successful organizations usually enjoy strong and effective organizational culture (Bahr-ol-olum and Tabesh, 2002).

Existing studies all point to the importance of knowledge in the present time. For organizations, the need of knowledge and the subsequent need of its effective management stem from the fact that knowledge is a basic element of organizational performance and plays a crucial role in achieving a stable competitive advantage (Davenport. T. and Grover, v.2001.18).

This means that in order to remain at the front line of competition and to maintain a competitive advantage, organizations need sufficient capacity for conserving, developing, organizing, and utilizing employees' knowledge and other strengths. Since cultural environment has the most profound, extensive, and long-lasting impact on the social behavior of organizations' employees, and taking into account the fact that knowledge is a social product, growth in knowledge cannot happen spontaneously, but only in appropriate conditions (Robbins, 2006, p. 85).

In the era of rapid advances in science and technology, the image of schools is being thoroughly changed. In such conditions, merely having knowledge, information, and skills in the field of education, or being aware of educational principles and strategies are not sufficient for school principals and teachers. In addition to those, being able to organize and properly utilize knowledge and information in educational environments is a crucial requirement for them (Rahimi and Najafi, 2007, p. 18, 20).

Today's dynamic and complex working environment has made it a requirement for businesses to constantly utilize new knowledge through creating, validating, and applying it to their products and services. This means that by relying on up-to-date knowledge, organizations' managers will be able to make more reasonable decisions regarding important affairs and generally improve their organizations' knowledge-based functions. Because of this, knowledge management is considered to be more important than knowledge itself. This is because the purpose of knowledge management is to define processes through which existing individual or organizational raw information can turn into useful, applicable, individual or collective knowledge and skills. Thus, organizations must provide members with appropriate conditions for sharing and transferring knowledge among themselves, while educating them in order to make their interactions more meaningful.

Today, education in Iran is faced with many complex problems and challenges. Many researchers believe that most of social problems, disorders, failures, and crises are rooted in the educational system and the current process of education. Approximately 15% of the country's budget is consumed by educational affairs, which is the largest share of the governmental budget. However, despite this, and the hard work of the majority of the country's teachers, the outcome is not satisfactory and there is little effective output from the educational system, such that it is constantly the target of criticism by the public and observers.

In this research, knowledge management is assumed as a non-negligible way of achieving innovation. This means that organizations that are unable to produce knowledge, or organize and manage existing knowledge in order to exploit it in the present and future, are unlikely to innovate. Besides not being unable to utilize their knowledge and information, such organizations are likely to lose considerable amount of energy and accuracy during unnecessarily repeated tasks. Arguably, in today's constantly changing business environment, an organization that is not able to innovate is unlikely to endure competition (Afkhani, 2010). This research seeks to examine the relationship between organizational culture and knowledge management, and in this regard, tries to take its share of measures to provide the necessary background for an appropriate implementation of knowledge management while considering the organizational culture of the Department of Education, taking into account the fact that understanding organizational culture is crucial to implementing proper management in organizations.

Organizational culture can impact all aspects of organizations. Research shows that the development of goals, strategies, individual behaviors, organizational performance, job satisfaction and motivation, creativity and innovation, employees' involvement in organizational affairs, as well as their decision making, dedication, commitment, and perseverance, among other organizational aspects, are all under the influence of organizational culture (Zarei, 2003, p. 58). In this regard, Ribiere believes that organizational culture is the basis for organizational productivity, determines efficient and non-efficient performance, provides models for interactions between individuals in the organization, and brings about consistency and harmony for the organization and its members.

Therefore, to be able to survive in a rapidly changing world, organizations need to adapt to changes, and have the capacity to develop new attitudes and new skills in new conditions. One of the rational responses to a changing environment is increasing the awareness of the importance of knowledge obtained through learning. According to Nonaka, a well-known Japanese theorist, in an economy where the only stable factor is instability, knowledge can be seen as a long-term, reliable source of competitive advantage (Rading, 2004). Given the heavy impact of the presence of rich organizational culture on the advances of organizations towards their goals and boosting the spirit of working in the employees, and considering management's essential role in cultural development, one can clearly see the high importance of those two factors (Akrami, 2001). Having proper insight into an organization's dominant culture is one of the most important requirements for proper management of that organization. The impact of organizational culture on the development of human forces, individual and social behaviors, organizational beliefs, values, and norms has caused significant expansion of the studies performed on the topic of culture in the field of organizational behavior. An organization's survival depends upon proper involvement of a rich

organizational culture. When a rich, proper organizational culture is present in an organization, individuals will participate in the organization's affairs and the members will be able to manage the organization's problems efficiently.

However, the first question in this regard is whether or not knowledge holders are inclined to support such a process. This requires a supportive culture shared by organizations, because organizational culture forms a complex part of employees' beliefs and values, which impacts their attitudes and behaviors in the work environment (Zarei, 2005, p. 38). Thus, the presence of a flexible organizational culture that is able to properly respond to changes and keep the organization in a reasonable competitive advantage seems necessary for organizations to be able to collect or create the needed knowledge, understand it, and distribute it among employees.

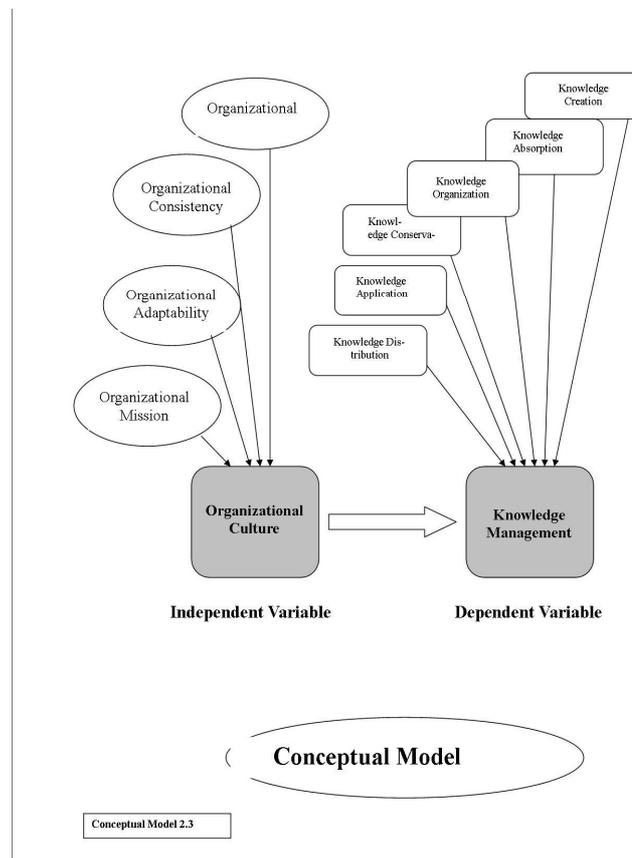
Research findings point to the effects of organizational culture on behavior: Organizations that eagerly protect and promote key beliefs and basic values, generally have more committed members and a richer culture, with more satisfaction and less leaving or moving members. Members of such organizations are more interested in their job and do their work better.

Considering this, organizational culture is a contributing factor to the organization's efficacy (Moshabaki, 2008), and it can be said that organizational culture impacts knowledge management to the extent that by studying different aspects of a given organization's culture, one can learn about the behaviors and attitudes of its members and predict their possible responses to future events. Organizational culture is in fact complementary to organizations' function. A rich organizational culture creates empathy among members of an organization and helps them to see themselves as a community.

Taking into account the fact that the goal of knowledge management is to influence action quality in social systems through a quality control based on learning and problem solving, it can be also referred to as social capital management, which is about different forms of social capital such as norms, trust, and networks, each of which is considered to be a type of knowledge. According to Coleman's view, norms can be explained subjectively and also objectively, that is, as knowledge

To study organizational culture in this research, Daniel Denison's cultural model is used, which is one of the most recent and comprehensive organizational culture models. The model's up-to-datedness compared with other models, its behavior base, its comprehensiveness in terms of measurement indices and assessment of various aspects of organizational culture, as well as the fact that it can be used for all organizational levels, are among the criteria for choosing Denison's model over others.

### Conceptual Model



## Research Hypotheses

### *The Main Hypothesis:*

There is a relationship between organizational culture and the implementation of knowledge management from the perspective of the school principals of the city of Marand.

### *Sub-hypotheses:*

1. There is a relationship between organizational adaptability and the implementation of knowledge management from the perspective of the school principals of the city of Marand.
2. There is a relationship between organizational involvement and the implementation of knowledge management from the perspective of the school principals of the city of Marand.
3. There is a relationship between organizational consistency and the implementation of knowledge management from the perspective of the school principals of the city of Marand.
4. There is a relationship between organizational mission and the implementation of knowledge management from the perspective of the school principals of the city of Marand.
5. There is a relationship between the components (*traits*) of organizational culture and the implementation of knowledge management.
6. Demographic variables such as principals' *Gender, Level of Education, Principalship Experience, Academic Discipline, and Principalship School Level* affect the relationship between organizational culture and the implementation of knowledge management as moderating variables.
7. There is a significant difference between the average rankings of the components of knowledge management.

## Methodology

The current research is applied in terms of purpose, and descriptive-survey in terms of data collection method.

Considering the research purpose, which is studying the relationship between organizational culture and knowledge management implementation from the perspective of the school principals from Marand during the Iranian school year of 2012-2013, the statistical population includes all school principals of elementary schools, middle schools, and high schools of the city, which are in total 80 individuals.

The sampling was done using the stratified random sampling technique. To determine the sample size, Krejcie and Morgan's method was employed. Of the population of total 80 school principals, 66 were selected as the sample of the study using Krejcie and Morgan's table.

Of the 22 high school principals, 25 middle school principals, and 33 elementary school principals, 18, 21, and 27 individuals were selected respectively. Two questionnaires have been used in this research:

1. The Denison Organizational Culture Survey (DOCS), with 36 questions and 5 choices.
2. Sheron Lawson's knowledge management questionnaire, with 24 questions and 5 choices.

The measuring instrument used in this research is questionnaire, and the data analysis was done using the SPSS software. To test the reliability of the questionnaire, the Cronbach's alpha test was performed.

Variable	Cronbach's $\alpha$ value
Involvement	0.76
Consistency	0.97
Adaptability	0.71
Mission	0.73

**Table 3.5**  
**Cronbach's  $\alpha$  calculated for research variables**

Variable	Chronbach's $\alpha$ value
Knowledge Creation	0.85
Knowledge Absorption	0.86
Knowledge Organization	0.72
Knowledge Conservation	0.73
Knowledge Distribution	0.69
Knowledge Application	0.71

**Table 3.6**

The scope of the research in terms of subject includes organizational culture and knowledge management; in terms of place the schools of the three Iranian educational levels, that is, elementary, middle, and high schools, operating in the city of Marand, Iran. The time frame of the research is the Iranian school year of 2012-2013, which spans between September 2012 and December 2012.

Data analysis was done in two stages, namely descriptive and inferential, which are detailed below:

1. Descriptive statistics were used to find out the mean, the standard deviation, and the variance.

In the inferential stage, the following tests have been performed:

2. The Kolmogorov–Smirnov test was used to test the normality of the data distribution of the questionnaires.

3. Pearson's correlation test was used to test the research hypotheses.

4. Regression analysis was used to explain the influence of organizational culture traits on knowledge management.

5. To test variables such as *Gender, Education, Experience, Discipline, and Level*, the Multivariate analysis of variance (MANOVA) was used.

### Descriptive Statistics of the variables

#### Organizational Culture Traits

Number	SD	Mean	Variable
66	0/334	3/07	<i>Organizational Culture</i>
66	0/493	3/46	Involvement
66	0/482	3/76	Consistency
66	0/494	3/45	Adaptability
66	0/422	3/49	Mission

#### Knowledge Management Components

Number	SD	Mean	Variable
66	0/583	3/42	<i>Knowledge Management</i>
66	0/786	3/51	Knowledge Creation
66	0/832	3/11	Knowledge Absorption
66	0/700	3/42	Knowledge Organization
66	0/698	3/52	Knowledge Conservation
66	0/809	3/63	Knowledge Distribution
66	0/729	3/43	Knowledge Application

Table 4-6

Distribution Normality	k-s value	p-value	Variable
Normal	0/588	0/880	Organizational Culture
Normal	0/160	1/32	Knowledge Management
Normal	0/772	0/590	Employee Involvement
Normal	1/880	0/187	Organization Consistency
Normal	0/493	0/968	Organization Adaptability
Normal	0/634	0/816	Organization Mission

Table 4.8 - The Kolmogorov–Smirnov test results

T	$\beta$	Significance Level (P)	F	R <sup>2</sup>	R	Variables	Model Index
4/265	0/495	0/000	20/80	0/245	0/495	Involvement	1
4/543 2/089	0/464 0/224	0/000	13/751	0/295	0/543	Involvement Mission	2

Significance Level (P)	F-test	Mean Square	Degrees of Freedom (dF)	Sum of Squares	Index Source of Variability
0/563	0/344	0/124	1	0/124	Gender-Culture Interaction
0/443	0/606	0/218	1	0/218	Education-Culture Interaction
0/473	0/529	0/190	1	0/19	Experience-Culture Interaction
0/302	1/109	0/399	1	0/399	Discipline-Culture Interaction
0/765	/091	0/033	1	0/033	Level-Culture Interaction

## DISCUSSION AND CONCLUSION

**The main hypothesis** states that there is a significant relationship between organizational culture and the implementation of knowledge management from the perspective of the school principals of the city of Marand.

The hypothesis was tested using Pearson's correlation test, the results of which supported the hypothesis. Based on the results from the analysis of the main hypothesis, an organization's culture can influence knowledge management. As a source of knowledge, the content of organizational culture can be reinforced by individuals, instructions, procedures, and computer systems. Furthermore, learning, and individual and organizational development should be valued in organizations. Thus, knowledge-oriented organizational culture can create proper context for successful implementation of knowledge management in organizations.

It can be argued that an organization's dominant culture forms its foundations and persona, and plays an effective role in the establishment of knowledge management in the organization. In order to effectively establish knowledge and distribute it through the organization, The Department of Education must consider organizational culture with high priority.

In order to be able to efficiently utilize knowledge management establishment plans, and to successfully implement knowledge management in organizations, the Department of Education primarily needs to recognize its organizational culture, and then deploy knowledge management plans accordingly. Issues in organizational culture are among the key issues that knowledge management executives must consider seriously in order to be able to successfully implement their plans.

**The first sub-hypothesis** states that there is a relationship between organizational adaptability and the implementation of knowledge management.

The statement was tested by performing a Pearson's correlation test, the results of which supported the first sub-hypothesis by indicating with a probability of 95% that there is a relationship between adaptability and the implementation of knowledge management. It can be concluded that when an organization gains deep insight into its goals and direction, its internal consistency and adaptability will also increase.

**The second sub-hypothesis** states that there is a relationship between organizational involvement and the implementation of knowledge management.

The hypothesis was tested by performing a Pearson's correlation test. The results indicated with a probability of 99% that there is a significant relationship between organizational involvement and the implementation of knowledge management, thus supporting the second sub-hypothesis. According to the respondents, individuals in all levels of management believe that they are involved in decision making, which they believe will affect their jobs, and that what they do is directly linked with the organization's goals.

**The third sub-hypothesis** states that there is a relationship between organizational consistency and the implementation of knowledge management.

Consistency is measured by three indices, namely *Core Values*, *Agreement*, and *Coordination and Integration*. Studies indicate that effective organizations are generally stable and consistent, and their employees' behavior is rooted in the organization's fundamental values. Leaders of such organizations and their followers are well-skilled in reaching agreements, and their organizational activities are coordinated and interconnected properly.

Organizations featuring such characteristics generally have strong, distinctive culture and can properly impact the employees' behavior.

According to the results of a Pearson's correlation test performed to test the hypothesis, it can be said with a probability of 95% that there is a relationship between organizational consistency and the implementation of knowledge management. Therefore, the third sub-hypothesis is also accepted.

Respondents believe that organizational consistency leads to improved decision making, higher employee satisfaction, competitive advantage based on intellectual and social assets, and development and empowerment of the knowledge management work force.

**The fourth sub-hypothesis** states that there is a relationship between organizational mission and the implementation of knowledge management.

Mission is also measured by three indices, which are *Strategic Direction and Intent, Goals and Objectives*, and *Vision*. It can be argued that mission is the most important trait of organizational culture. Organizations that are not aware of the direction they are headed, and of their current situation, often deviate from their intended path.

Successful organizations have a clear understanding of their purpose and direction, such that by defining their organizational and strategic objectives, they illustrate their vision clearly.

The fourth sub-hypothesis was supported by a Pearson's correlation test with the result of  $r = 0.288$ . Therefore, the results indicate with a probability of 90% that there is a relationship between organizational mission and the implementation of knowledge management.

**The fifth sub-hypothesis** states that there is a relationship between the traits of organizational culture and the implementation of knowledge management.

To test this statement, regression analysis was performed. According to the results, *involvement* and *vision* explained 54% of knowledge management variations simultaneously. This implies that Organizational Involvement, indicated by *Empowerment, Team Orientation, and Capability Development*, together with Organizational Mission, indicated by *Strategic Direction and Intent, Goals and Objectives, and Vision* can properly shape and direct the implementation of knowledge management in educational organizations like schools. Furthermore, by investing in other factors such as Organizational Consistency, indicated by *Core Values, Agreement, and Coordination and Integration*, in addition to Organizational Adaptability, indicated by *Creating Change, Customer Focus, and Organizational Learning* in schools, more potential can be exploited in for a successful implementation of knowledge management in schools.

**The sixth sub-hypothesis** states that demographic variables such as *Gender, Level of Education, Principalship Experience, Academic Discipline, and Principalship School Level* can affect the relationship between organizational culture and the implementation of knowledge management as moderating variables.

To test this statement, multivariate analysis of variance was used, the results of which did not support the hypothesis. This means that none of the interactions were significant at  $p > 0.05$ .

Research findings also suggest that gender, education, experience, discipline, or management level cause no significant difference in the relationship between organizational culture and knowledge management. Therefore, those factors cannot act as moderating variables in the relationship between organizational culture and knowledge management.

**The seventh sub-hypothesis** states that there is a significant difference between the average rankings of the components of knowledge management.

Friedman analysis of variance shows a significance number of  $\text{sig} = 0.079$ , which is higher than the error level (0.05).

This means that the difference between the average rankings of knowledge management components is not significant. Regarding the rankings of those components, knowledge *application* and *distribution* ranked first together, while knowledge *organization, conservation, absorption, and creation* ranked second, third, fourth and fifth respectively. According to our findings, knowledge management components ranked similarly, and the state of them among the schools of Marand seems to be relatively favorable, which is desired. On the other hand, knowledge creation, absorption, and conservation also require serious attention of the executives of the Department of Education.

It can be concluded that organizational culture and knowledge management, as well as the relationship between them, are crucial to the progress of education in all aspects, and require top high-ranking executives of the Department of Education to seriously consider them.

Based on the findings, we propose the following recommendations:

1. Since the findings supported the significance of the relationship between organizational culture and knowledge management implementation, we suggest that in order to achieve knowledge management goals, high-ranking executives of the Department of Education take into account the dominant culture of their organization, and consider it of high importance.

2. Considering the strong, positive, and significant influence of involvement-oriented organizational culture on knowledge management implementation, we suggest that training courses of empowerment, team orientation, and capability development be held for school principals to achieve a better implementation of knowledge management.
3. Considering the importance of managers' role and behavior, and its impact on the formation of cultural standards, and given the positive correlation of involvement-oriented and mission-oriented models of organizational culture and implementation of knowledge management in schools, we suggest that managers and executives of the Department of Education take measures for reinforcing those two cultural models in schools.
4. Considering the results from the regression analysis, we suggest that in order to improve the state of knowledge management in the Department of Education, the executives put more effort into proper establishment of organizational involvement and organizational mission.
5. Given the results regarding the seventh sub-hypothesis, we suggest building trust throughout the organization, such that employees not feel insecure about transferring their professional knowledge to others and encouraging knowledgeable individuals to do this. We also suggest devising a process through which the knowledge of competitors be also exploited.

## REFERENCES

1. Alvani, M., (2009). Public Management, Tehran, Ney.
2. Arbab-shirani, B., (2002). *Determining Necessary Elements for Creating Knowledge and Their Measurement Method in Engineering Organizations* (PhD thesis). Tarbiyate Modarres University.
3. Afraze, A., (2005). *Knowledge Management; Concepts, Models, Measurement, and Implementation*. Tehran, Faraz.
4. Abtahi, S. H. and Salavati, A., (2006). *Knowledge Management in Organizations*. Tehran, Peyvande No.
5. Afkhami, A., (2010). *A Study of the Components of Knowledge Management with Innovation in Organizations* (Master's thesis).
6. Probst, G., (2006). *Managing Knowledge* (Translation). Tehran, Yastorun.
7. Hoseyngholi-zadeh, R. (2008). *A Study of the Position of Knowledge Management in the University of Ferdowsi Based on Nonaka's theory and its relationship with employees' commitment in Isfahan Municipality* (Master's thesis). University of Tehran.
8. Rading, A. (2004). *Knowledge Management: Success in Global Economics Based on Information* (Translated by Latifi, M. H.). Tehran, Samt.
9. Robbins, S. P. (2006). *Organizational Behavior* (Translated by Parsaiyan, A. and A'rabi, M.). Tehran, Institute for Cultural Studies and Research.
10. Alavi and Leidner, DE (2001), *Review: Knowledge Management and Knowledge Systems Conceptual Foundations and Research Issues*.
11. Davenport, T., and Grover, V. (2001). *Knowledge management*. Journal of Management Information Systems.
12. Haney, DS (2003). *Knowledge Management in a Professional Service Firm*.
13. Marco, D. and Art, E. (2009). *Knowledge Management for Higher Education*, University of Virginia Press.
14. Cameron, K.S. and Quinn, R.E. (2006). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*.