A Survey about the Structural and Cultural Factors of an Organization with Information Systems Strategy of Knowledge Management

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ABSTRACT: Nowadays knowledge is considered as the main valuable source in organizations, in a way that organizations call it as an asset and providing high-quality and economic products and services without management and appropriate use of this valuable source seems like an adversity and sometimes it is impossible. This research aims to survey the correlation between the structural and cultural factors of an organization with information systems strategy of knowledge management in the Technical and Vocational Training Organization of West Azerbaijan province. The current research methodology is descriptive-analytic and sectional and it has been conducted in 2013. The population included all of the staff at different levels of Technical and Vocational Training Organization of West Azerbaijan province, among which 186 individuals were randomly chosen. Data collection tool was a questionnaire and its validity has been approved by the use of method of experts’ comments and its reliability has been approved by the use of Cronbach’s alpha. The collected data were analyzed by the use of SPSS 20 software through descriptive statistical method (such as table, mean and variance) and inferential method through the use of Pearson correlation coefficient. Results indicate the average condition of knowledge management due to the excessive formality and focus in the organizational structure of the surveyed centers, as such the correlation between formality, complexity and focus (respectively with the correlation coefficients of 0.428, 0.222, and 0.323) with knowledge creation is positive and the correlation of formality, complexity, and focus (respectively with the correlation coefficients of 0.256, 0.122, and 0.312) with the knowledge transfer is positive. While results indicate the high amount of knowledge management condition with the cultural factors of the organization, in a way that the correlation between culture of sharing and culture of learning (respectively with the correlation coefficients of 0.68, and 0.767) with knowledge creation is positive and the correlation between culture of sharing and culture of learning (respectively with the correlation coefficients of 0.938 and 0.60) with knowledge transfer is positive. Regarding the correlation between the structural and cultural factors of the organization with the information systems strategy of knowledge management and also the role of knowledge in nurturing the efficient manpower it is recommended to pay adequate and all-aspect attention to the structural and cultural dimensions of organization in the centers of Technical and Vocational training Organizations.

Keywords: Structural and cultural factors, Information system, Knowledge management.

INTRODUCTION

During the recent years several organizations and companies have joined the knowledge procedure. Peter Drucker used these terms for reporting the formation of a new type of organizations in which the power of mind rules instead of power of arm. Thus enjoyment of natural resources could not be as important as knowledge (Danaei Fard et al., 2011). In the current knowledge-based economies knowledge is considered as a key source which could be managed the same as cash flow, HR, and/or basic materials. In such situation only organizations can have a successful performance that could utilize the knowledge as a constant competitive advantage. Thus the knowledge management has become one of
the most important tasks of the organizations that try to become a LO, organizations that effectively take action for acquiring, creating and transforming knowledge and utilizing it for revising and improving the activities and their performance (Wang et al., 2003). Knowledge management is the new effort of a century called age of wisdom for maintaining, guiding and targeted increasing of the organizations knowledge assets and refers to this point that investing in knowledge and science brings the best and most profit. Knowledge management is a process which assists the organizations to find the important information, choose them, organize them and publish them. Knowledge management is a specialty that is necessary for activities such as solving the problems of dynamic learning, strategic planning, and decision making (Rahman Seresht et al., 2011).

In several studies performed by management researchers factors such as organizational structure, IT, and external environment have been surveyed, but the important factor surveyed in some of the researches is culture and the organizational structure, because the organizational culture has affected all of the organizational aspects, it strengthens the organizations based on the shared beliefs and values, and it affects the attitude of individual behavior, motivation and job satisfaction, and the commitment level of manpower, and it also affects the structure design and organizational systems, targeting, formulating and implementing the policies, strategies etc. Thus only by surveying, changing and forming an appropriate and flexible organizational culture it is possible to gradually change the pattern of interaction between people in this organization and it is possible to use the knowledge management as a competitive advantage (Bhatt, 2001). In the eyes of others culture is considered as the mental identity of the institution, which means the image about the strategies, productions, values, and services in the minds of staff, clients, and executive managers (Danesh Fard, 2010).

In today’s postindustrial world development generally and without paying attention to the technical and vocational training organizations means nothing. The scientific-technical revolution has created a deep quality revolution in production powers and manpower as such and production methods. Development of technical and vocational trainings in the current conditions are vital for the economy and culture of Iran and especially accelerating the production process; because the infrastructural investments and increasing the tools and equipment and generally the physical capitals without the human capital is useless and/or they are not utilized in terms of economy and efficiency. Thus the education system for creating the required skills of human capital is one of the necessities and requirements of economic growth and development, while the technical and vocational trainings are a combination of science, technique and art and they have a very important role in supplying the efficient manpower and it has a developmental content (Jafari Moghaddam, 2002). The aim of these trainings is increasing the knowledge abilities, skills and individuals’ understanding and a more desirable method of doing the tasks in the scope of job duties.

Jafari et al (2011) studied the correlation between the structural and cultural factors of the organization with the knowledge management strategy in the public educational health centers of Tehran University of Medical Sciences; results indicated the average condition of knowledge management due to the excessive formality and focus on the organizational structure of the surveyed centers. The Correlation coefficient indicated a significant correlation between the structural and cultural dimensions of the organization and the knowledge management, so that this correlation is negative (reverse) with focus and formality and it is positive with the stream of communications and sharing knowledge and continuous learning. In a research named surveying the correlation between the organizational culture based on the Quinn’s model and the feasibility of establishing knowledge in Iranian Gas Transmission Corporation, Kouchaki Siah Khalehsar et al (2012) concluded that a positive and significant correlation exists between the organizational culture and knowledge management in Iranian Gas Transmission Corporation. The results achieved from the regression analysis show that within this corporation only the culture of adhocracy among the other types of organizational culture could be considered as a predictable and effective culture on the knowledge management. In a research Goudarzi et al (2009) studied the correlation between the organizational culture and the knowledge management of staff managers of physical education organization, the research results show that no significant correlation exists between the culture of sharing and creating knowledge, but a significant correlation exists between the culture of sharing and knowledge transfer, and also a significant correlation exists between the continuous learning and creating and transferring knowledge, and finally they found out that the organization should consider the knowledge management as a whole. Naghi Pour et al (2008) surveyed the condition of organizational culture and the organizational structure related to the utilization of knowledge management in central libraries of Iranian medical universities. The study findings showed that the organizational structure for the knowledge management at the surveyed libraries are in the average zone, but the organizational culture of the knowledge management is in the appropriate zone. Amin Bidokhti et al (2011) studied the correlation between organizational culture and the knowledge management in the Education Organization of Semnan province, the research results show that a positive and significant correlation exists between the organizational culture
and the knowledge management, and additionally also a positive and significant correlation exists between all types of the organizational culture (such as hierarchies, market and adhocracy status) and the knowledge management. In another research named how organizational climate and structure affect knowledge management conducted by Chen and Huang (2007) the organizational climate and structure was surveyed in terms of social interaction. The structural variables being studied by these two researchers were formality and focus and organizational climate variables, and environment of cooperation and innovation. The data analysis results lead to the proving the research hypothesis which means the existence of a negative correlation between formality and social interactions and also focus and social interactions. In a research named designing a model for the knowledge management effectiveness, Lee (2001) considered three factors of market (costumer, product and competitors), organizational ultrastructure (organizational culture, IT, and organizational structure) and capacity of knowledge processing (the ability to gain knowledge, produce it, reserve it and utilize it) as the independent variables and the knowledge management as the dependent variable. Lee’s research results show that among the mentioned factors of the model, the customer satisfaction in the market factors, organizational culture in organizational ultrastructure and the ability to utilize knowledge in knowledge management processes has the most effect on the knowledge management.

In Technical and vocational training organization the same as other formal and informal institutions, apart from teaching science and skills, other items such as discipline, imitation, commitment, responsibility, and loyalty are also a part of the educational content and they are taught to people. Thus this education system could enhance the efficiency and productivity and have an effective role through the transformation of the society’s culture. Due to the improvement of social relationships, and human relations, transferring values and social norms, individuals’ sociability etc. The role of these trainings are very important in social and cultural changes. Regarding the government’s approach toward the knowledge based systems and the importance of knowledge and science in 2026 vision of Iran, paying attention to the learning organizations which within the creation and publication of knowledge has become a public value and culture has become very important. Up to now several studies and researches have been conducted in the field of knowledge management in different organizations and institution, but in terms of the correlation of organizational factors and the knowledge management in Technical and Vocational Training centers no research has been conducted, and this issue reveals the necessity of conducting this research. Among several organizational factors mentioned in different organizational models this research has surveyed the key factors of organization structure and organization culture in relation to the knowledge management. Creating knowledge and transferring it are considered as two key activities in knowledge management, thus in this research the correlation between these organizational factors and two main activities of knowledge management (knowledge creation) and (knowledge transfer) have been surveyed.

**METHODOLOGY**

In terms of data collection this research is a descriptive-survey research, and since this research seeks to determine and study the correlation between the structural and cultural factors of the organization with the information systems strategy of knowledge management in Technical and Vocational Training Organization of West Azerbaijan. The current research methodology is correlative, also in terms of aim it is considered as an applied research. In this research the independent (predictor) variable is structural and cultural factors of the organization and the dependent variable (criterion) is information systems strategy of knowledge management. In the current research a questionnaire has been used for reaching the information in order to confirm or reject the research hypotheses. This questionnaire has been used in several researches and thus it has an appropriate validity. For achieving the reliability of questionnaire of structural and cultural factors of the organization and information systems strategy of knowledge management in the current research the Cronbach’s alpha has been used. The overall reliability coefficient for the questionnaire of cultural factors of the organization was 0.825 and for the questionnaire of cultural factors of the organization it was 0.868 and for the questionnaire of information systems strategy of knowledge management it was 0.921, and if the number achieved is bigger than 0.75 it shows the high reliability of the questionnaire or the measuring tool, thus the above mentioned percentages indicate the stability and internal consistency of the questionnaire, and it is practical for different uses. The current research population includes all of the staff at different levels of Technical and Vocational Training Organization of West Azerbaijan province and the population size equals 357 individuals. The sample size was achieved by the use of Morgan table and it was 186 individuals and the questionnaire was distributed among them. The mean and standard deviation have been used in descriptive statistics and the Pearson correlation coefficient has been used in the inferential statistics with the help of SPSS 20 software.
RESULTS

Describing the research data showed that 155 examinees were males and 31 examinees were females. More than 87% of the examinees were at the age range of 31-50. More than 47% of the examinees had bachelor degree; more than 27% of the examinees which equals 51 individuals had 11-15 years of job experience. Also the final mean of structural factors of the organization equals 1.93 with SD of 0.66, the final mean of component of the culture of sharing equals 1.77 with SD of 0.86, the final mean of component of continuous learning of the organization equals 1.85 with SD of 0.71, the final mean of structural and cultural factors of the organization equals 1.85 with SD of 0.74, the final mean of components of knowledge creation equals 1.78 with SD of 0.68 and the final mean of component of knowledge transfer equals 1.84 with SD of 0.83. In figure 1, the Histogram related to the research examinees’ work experience is shown. It should be mentioned that the numbers 1 to 5 in the diagram refer to 1 to 5 and more than 20 years.

![Histogram](image)

Figure 1. Column Chart of individuals’ statistical sample based on the work experience.

In table 1 the correlation coefficients and their significance level between the structural and cultural factors of the organization and the knowledge management factors are provided.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>r</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational structure and culture and the knowledge management</td>
<td>186</td>
<td>0.897</td>
<td>0.00</td>
</tr>
<tr>
<td>Formality &amp; knowledge creation</td>
<td>186</td>
<td>0.428</td>
<td>0.00</td>
</tr>
<tr>
<td>Complexity and knowledge creation</td>
<td>186</td>
<td>0.222</td>
<td>0.02</td>
</tr>
<tr>
<td>Focus and knowledge creation</td>
<td>186</td>
<td>0.323</td>
<td>0.00</td>
</tr>
<tr>
<td>Formality and knowledge transfer</td>
<td>186</td>
<td>0.256</td>
<td>0.00</td>
</tr>
<tr>
<td>Complexity and knowledge transfer</td>
<td>186</td>
<td>0.122</td>
<td>0.96</td>
</tr>
<tr>
<td>Focus and knowledge transfer</td>
<td>186</td>
<td>0.312</td>
<td>0.00</td>
</tr>
<tr>
<td>Culture of sharing and knowledge creation</td>
<td>186</td>
<td>0.680</td>
<td>0.00</td>
</tr>
<tr>
<td>Culture of learning and knowledge creation</td>
<td>186</td>
<td>0.767</td>
<td>0.00</td>
</tr>
<tr>
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<td>0.00</td>
</tr>
<tr>
<td>Culture of learning and knowledge transfer</td>
<td>186</td>
<td>0.600</td>
<td>0.00</td>
</tr>
</tbody>
</table>

It should be mentioned that as it is observable in table 1, the organizational structure has three dimensions of formality, complexity and focus, and cultural factors have two dimensions of culture of learning and culture of sharing and the knowledge management factors also include the knowledge creation and knowledge transfer. As it is observable the Pearson correlation coefficient is positive between all of the structural and cultural factors of the organization and the knowledge management and also in all of these situations the correlation coefficient is significant except for the
complexity and knowledge transfer in which the correlation coefficient is not significant. As a conclusion at confidence level 99% it could be concluded that except for the complexity and knowledge transfer a positive and significant correlation exists between all of the other structural and cultural factors of the organization and the knowledge management.

**DISCUSSION AND CONCLUSION**

The overall aim of the research is studying the correlation between the structural and cultural factors of the organization with the information systems strategy of knowledge management in Technical and Vocational Training organization of West Azerbaijan in 2013. About the main research hypothesis the results showed that a positive and significant correlation exists between the structural and cultural factors of the organization with the information systems strategy of knowledge management and the research hypothesis is confirmed. The correlation coefficient between the structural and cultural factors of the organization with the strategy of knowledge management is 0.897. The achieved results are consistent with the researches of Jafari et al (2011), and Goudarzi et al (2009). The achieved results show a significant correlation between these variables ($r= 0.897$, $p \leq 0.01$). According to the research results of Technical and Vocational Training organization of West Azerbaijan, due to the qualitative and quantitative low academic level of the staff the managers have to enact and enforce more strict organizational rules and regulations in order to make the organizational factors affect the information systems strategy of knowledge management. Also due to the high correlation between the factors of organizational culture and the information systems strategy of knowledge management it is recommended to take more effective steps toward successful establishment of knowledge management in the field of creating and transferring knowledge.

Also according to this matter that the culture of sharing and culture of learning had an appropriate condition at the studied centers, and they were part of the dominant culture, and also they had a positive and significant correlation with dimensions of knowledge management, thus it is recommended to the senior managers of these centers to try to maintain the employees’ trust as the main culture and in order to keep the current situation and enhancing the culture of sharing and learning, they should offer financial and non-financial incentives such as use of organization welfare facilities, signing contracts with entertainment centers especially for the staff who have spirit of cooperation, extra payment for the individuals who participate in the courses, seminars and reputable conferences, financial support from the staff who provide scientific articles and proposals appropriate for the organization goals. For the future researches in this field it is recommended to conduct researches in the field of determining the correlation between other structural and cultural factors of the organization with the information systems strategy of knowledge management, also it is recommended to study the role of reengineering the processes in implementing the information systems strategy of knowledge management.

**REFERENCES**


