Explaining the Relation between Organizational Culture and Dimensions of the Learning Organization
Case Study: Telecommunications Company in Borujerd County

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Abstract
This survey was performed to explain the relation between organizational culture and dimensions of learning organization in the Telecommunications Company in Borujerd County. The statistical population included two-hundred eighty persons and the sample size was determined equal to one-hundred sixty two persons based on Morgan Table. Members of the sample were selected using random sampling method. Standard organizational culture questionnaire with 36 questions (Denison) and the researcher self-made questionnaire of learning organization with 25 questions (Peter Senge) were used for data collection. Experts confirmed the face validity and content validity of questionnaires and their reliability was calculated through Cronbach's alpha coefficient. Cronbach's alpha coefficient of organizational culture questionnaire was obtained equal to 0.91 and that of the learning organization was equal to 0.89. Data analysis and testing the research questions were conducted using SPSS software and Pio/sen correlation coefficient. The obtained results revealed that there is a significant relation between organizational culture and realization degree of learning organization. Also there is a significant relation among organizational culture and dimensions of personal mastery, shared vision and systems thinking.

Key words: organizational culture, Dennison's model, learning organization, Peter Senge’s model

Introduction
The current environment is complex and unpredictable (Frankema et al., 2006, p.291) and organizations are permanently faced with social developments such as globalization, technological progress and increasing of the global competition (Govaerts et al., 2011, p. 35).
Some organizations became successful in such environment and their business flourished and some other failed and did not continue the competition. Now this question is proposed: what distinguishes successful organizations from unsuccessful organizations? In this regard De Geus (1997) mentions that ability of learning faster than the competitors might be the only existing competitive advantage for organizations (Fisser & Browaeys, 2010, p. 58).

Organizational learning is one of the most meaningful characteristics of successful organizations in long-term (Bontis & Serenko, 2009, p. 55) that provides opportunities for organizations to be able to repeat their previous successes (Trim & Lee, 2007, p. 335). If an organization has intention to learn lower than its surrounding environment, it will doom to death (Aggestam, 2006, p.295).

Organizational culture in the literature related to organizational learning is mostly regarded as a facilitating factor or even a major condition for realization of organizational learning. This cultural orientation towards learning is referred to as learning-oriented culture or simple learning culture. Briefly, it is a kind of culture that organizational learning should have it (Rebelo & Gomes, 2011, p. 173).

Indeed as nations have different cultures, organizations have distinct procedures for believing, thinking and acting that are identified through symbols, heroes, rituals, ideology and values. Nature of learning and the procedure according to which learning is occurred in the organization are intensely defined by means of organizational culture. Although culture of many organizations is not anti-learning, it is non-learning. In such culture, risk-taking, trying to develop modern approaches, information sharing, etc are not encouraged while maintaining the current status might have rewards. In order that the organization becomes a learning one it should change these kinds of cultural values (Markuwart, 2007, p 101).

Since values of organizational culture can pave the way for realization of learning organization, the relation between organizational culture and dimensions of learning organization in the Telecommunications Company in Borujerd County was explained in the present survey.

Theoretical principles of the survey

A) Organizational culture

The term organizational culture has been adopted from anthropological studies in the organization (Chang & Lin, 2007, p.411). It was developed since 1970 and organizations paid
attention to it in 1980 (Kissack & Callahan, 2010, p.367) and was proposed since the 1980's onward especially in Schein's studies in 1985. According to him, organizational culture is a model of basic assumptions that has been invented by a certain group and developed since then, so it is matched with the external environment and is led to integration in the group. If it has effectiveness by passing of time, it will be validated so that it shapes proper perception of members, thought and emotions of people (Williams et al., 2010, p.86). As each person has personality characteristics and a special culture, the organization has its own special culture too (Chang & Lee, 2007, p.158).

Denison model

Professor Daniel Denison (2000) conducted researches in the field of organizational culture and effectiveness of the organization. He mentioned the cultural characteristics in his model as below: involvement, consistency, adaptability and mission (Chang & Lin, 2007, 441).

![Diagram 1- Model of organizational culture (Denison et al., 2003, p 209)](image-url)
Each characteristic is measured by three indexes:

1- Involvement: It means that the organization encourages involvement and participation of employees in works (Gudarzvand, Najbaee & Hashemi, 2011, p 54). This characteristic in this model is measured by three indexes of empowerment, team building and developing the capabilities (Fey & Denison, 2003, p.40).

2- Consistency (stability and integration): It is the methods and systems which form the basis of a strong culture and have a high tendency towards effectiveness (Gudarzvand, Najbaee & Hashemi, 2011, p 54). This characteristic is studied by three indexes of core values, agreement and coordination (Fey & Denison, 2003, p.40).

3- Adaptability: It means paying attention to requirements of the workplace in activities and includes a system of norms (Gudarzvand, Najbaee & Hashemi, 2011, p 54). This characteristic is investigated by three indexes of creating change, customer-orientation and organizational learning (Fey & Denison, 2003, p.40).

4- Mission: It contains definition of long-term directions for the organization and determining them (Gudarzvand, Najbaee & Hashemi, 2011, p 54). This characteristic is investigated by three indexes of strategic tendency, purposes and intentions and perspective (Fey & Denison, 2003, p.40).

B) Learning organization

According to most experts theory of learning organization belongs to Peter Senge (1990) (Dymock & McCarthy, 2006, p. 525). He believes that a learning organization is the one in which the individuals enhance their capabilities continuously to obtain the intended results (Smith, 2011, p. 7). Thus new thinking models and group thoughts are developed and people constantly learn to teach each other (Lewis, 2002, p. 282).

Senge proposed his classic book entitled "The fifth discipline: Methods to create the learning organization" in 1990 (Cavaleri, 2008, p.474) and explained disciplines in it which are necessary to convert organizations into learning organizations (Rifkin & Fulop, 1997, p.135). Five disciplines of Senge include personal mastery, mental models, shared vision, team learning and systems thinking (Parding, Abrahamsson, 2010, p. 294).

1) Personal mastery: It is a discipline towards "explicating and deepening the personal viewpoint of employees, concentrating their energy, developing patience as well as unbiased and realistic vision (Akhtar & Ahmad Khan, 2011, p.260). Indeed personal
capability is to see the reality as it is (Vargas-Hernández & Noruzi, 2010, p.192). It is a strategic element of the process of a learning organization that constitutes the central part of organizational capabilities (Som et al., A 2010, p. 118).

2) Mental models: They reflect mental image of people from the external world that affects their decisions and activities (Prugsamatz, 2010, p. 246). Developed mental models are the basis of "motivation" that constitute the foundation of all educational activities and learning (Bui & Baruch, B 2010, p. 234). In other words, mental models affect attitudes of people in the organization and determine which acts are done by people and which are not (Morrison & Rosenthal, 1997, p.125).

3) Shared vision: A vision is shared when people have a shared image from a desirable future and feel a mutual commitment to achieve it (Garcia-Morales et al., 2006, P. 25). It creates energy and focus towards learning and encourages risk-taking and testing. When people have really a shared viewpoint, they try to realize that shared desire (Akhtar & Ahmad Khan, 2011, p.261).

4) Team learning: It is the idea of cooperation and using teamwork effectively (Mehrabi et al., 2013, p. 133) and is a process through which capacity of team members is developed and the members are harmonized so that the obtained results would be favorable for all (Bui & Baruch, 2010, p. 214). Senge believes that team learning is very important, because these teams and not the people constitute the building block of learning in modern organizations (Nafukho et al., 2009, p. 36). To put it differently, individual learning depends on team learning (Small & Irvine, 2006, p.279).

5) Systems thinking: It is a discipline which has a holistic view and makes it possible to see the relations of things and causes changeable models to be appeared stable more than "snapshots". Moreover, the fifth discipline contains a set of all previous disciplines in an integrated body of theory and action (Akhtar & Ahmad Khan, 2011, p.261). It also includes the ability of paying attention to the environment and understanding the consequences of decisions on other parts of the system (Vargas-Hernández & Noruzi, 2010, p.192). In fact, systems thinking is paying attention to the whole rather than the individual elements (Teare & Dealtry, 1998, p. 49).
Research background

Mahler (1997) conducted a survey entitled "the effect of organizational culture on learning in the public sector" and investigated about some elements of organizational culture that are effective on degree of learning by the organization. Those elements of organizational culture that are effective on learning include employees' beliefs of the information and courses of action in the organization (Mahler, 1997, p. 538).

Lopez et al. (2004) collected experimental evidences of the effects of organizational culture on learning organization. They concluded that organizational culture has a totally comprehensive and significant effect on the learning organization (Lopez et al., 2004, p. 101).

Jashapara (2003) conducted a study to determine the relation between cooperative organizational culture and learning organization and concluded that cooperative organizational culture improves the performance of organizational units. Also cooperative culture is led to learning in the organization (Jashapara, 2003, p. 45).

In a study entitled "Studying the relation among features of the learning organization, consistency with changes, innovation and organizational performances" Oubri and Forige (2005) concluded that the most important dimensions of the learning organization include consistency with changes, offering services rapidly and organizational performances that are related to structure, culture and information systems of organization (Kontoghiorghes et al., 2005, p. 204).

Kasper (2002) evaluated culture and leadership in a research and concluded that paying attention to the market and high quality of services have a close relation with giving value to the customer and high quality of performance in the learning organization (Kasper, 2002, p. 1053).

Conceptual framework

Conceptual framework is a model based on theoretical relations among several factors that are important about the issues under study. The following conceptual framework was studied in the present survey to explain the relation between organizational culture (Denison model) and dimensions of the learning organization (Peter Senge model) as it is shown in diagram 2. Besides, the items are named as below: involvement (IV), consistency (CO), adaptability (AD), mission (MI), organizational culture (OC), personal mastery (PM), mental models (MM), shared vision (SV), team learning (TL) and systems thinking (SA).
Diagram 2- Conceptual model of the survey

**Purposes of the survey**

1- Primary purpose: To explain the relation between organizational culture and realization degree of learning organization

2- Secondary purpose: To explain the relation between organizational culture and dimensions of the learning organization

**Research hypotheses**

1- Primary hypothesis: There is a significant relation between organizational culture and realization degree of the learning organization.

2- Secondary hypothesis: There is a significant relation between organizational culture and dimensions of the learning organization.

**Methodology and data collection methods**

This survey was conducted using descriptive-field method. Historical study was used to complete research literature and theoretical principles and field study was used to collect other required information from the statistical population. Closed questionnaire was applied to
collect field data. The applied questionnaires were of attitude survey and based on the Likert scale (six-option). For this reason, standard organizational culture questionnaire with 36 questions and researcher self-made questionnaire of learning organization with 25 questions were used.

**Statistical population, sample and sampling method**

The statistical population included male and female employees of the Telecommunications Company in Borujerd County with any age and gender who were two-hundred eighty persons and the sample size was determined equal to one-hundred sixty two persons based on Morgan Table. Members of the sample were selected using random sampling method.

**Reliability and validity of questionnaires**

Experts confirmed the face validity and content validity of questionnaires and reliability of questionnaires was calculated through Cronbach's alpha coefficient. Cronbach's alpha coefficient of organizational culture questionnaire was obtained equal to 0.91 and that of the learning organization was equal to 0.89. Alpha coefficients of other variables are shown in Table 1.

Table 1- Measuring the validity of questionnaires

<table>
<thead>
<tr>
<th>Variable</th>
<th>Alpha coefficient</th>
<th>Variable</th>
<th>Alpha coefficient</th>
<th>Variable</th>
<th>Alpha coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN</td>
<td>0.90</td>
<td>MI</td>
<td>0.91</td>
<td>SV</td>
<td>0.87</td>
</tr>
<tr>
<td>CO</td>
<td>0.87</td>
<td>PM</td>
<td>0.86</td>
<td>TL</td>
<td>0.84</td>
</tr>
<tr>
<td>AD</td>
<td>0.89</td>
<td>MM</td>
<td>0.88</td>
<td>SA</td>
<td>0.89</td>
</tr>
</tbody>
</table>

**Data analysis method**

Descriptive statistics and inferential statistics were used for data analysis. Descriptive statistics were utilized to estimate frequency distribution, percentage, mean, tables, etc and Pierson correlation coefficient was used to test the hypotheses.
Table 2- Describing dimensions of organizational culture and learning organization

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN</td>
<td>4.00</td>
<td>1.28</td>
</tr>
<tr>
<td>CO</td>
<td>3.36</td>
<td>1.31</td>
</tr>
<tr>
<td>AD</td>
<td>2.83</td>
<td>1.21</td>
</tr>
<tr>
<td>MI</td>
<td>4.04</td>
<td>1.36</td>
</tr>
<tr>
<td>PM</td>
<td>3.13</td>
<td>1.10</td>
</tr>
<tr>
<td>MM</td>
<td>3.66</td>
<td>1.21</td>
</tr>
<tr>
<td>SV</td>
<td>3.51</td>
<td>1.14</td>
</tr>
<tr>
<td>TL</td>
<td>3.01</td>
<td>1.11</td>
</tr>
<tr>
<td>SA</td>
<td>3.66</td>
<td>1.38</td>
</tr>
</tbody>
</table>

As results of Table 2 show, the Telecommunications Company in Borujerd County is lower than the average level in dimensions of adaptability, personal mastery and systems thinking. It is noteworthy that involvement is at the best status and systems thinking is at the weakest status than other dimensions of this survey.

Data analysis

Primary hypothesis: There is a significant relation between organizational culture and realization degree of learning organization.

Table 3- Correlation between organizational culture and realization degree of learning organization

<table>
<thead>
<tr>
<th>Organizational culture</th>
<th>Learning organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pierson correlation</td>
<td>0.258</td>
</tr>
<tr>
<td>Significance level</td>
<td>0.001</td>
</tr>
</tbody>
</table>

As the results of Table 3 show, the correlation coefficient between organizational culture and realization degree of the learning organization is equal to 0.258 and the significance level in this test is equal to sig=0.001 given to the numerical value. Because (sig<α) it indicates there is a relation between these two variables. Thus H0 is rejected and H1 is accepted. Since the correlation coefficient between the two variables is positive in this hypothesis this relation is positive (direct). Therefore, it can be stated that there is a positive (direct) relation between...
organizational culture and realization degree of the learning organization at confidence level 0.95.

In Table 4 the relation between organizational culture and dimensions of the learning organization has been studied. Wherever the significance level is less than 0.05, H0 is rejected at confidence level 0.95 (rejection of H0 means there is a significant relation between organizational culture and dimensions of the learning organization) and in other cases there is no significance relation at confidence level 0.95, because there are no adequate reasons to reject H0.

Secondary hypothesis: There is a significant relation between organizational culture and dimensions of the learning organization.

Table 4- Correlation between organizational culture and dimensions of the learning organization

<table>
<thead>
<tr>
<th>Organizational culture</th>
<th>Personal mastery</th>
<th>Mental models</th>
<th>Shared vision</th>
<th>Team learning</th>
<th>Systems thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pierson correlation</td>
<td>0.258</td>
<td>-0.056</td>
<td>0.161</td>
<td>0.074</td>
<td>-0.244</td>
</tr>
<tr>
<td>Significance level</td>
<td>0.001</td>
<td>0.480</td>
<td>0.041</td>
<td>0.350</td>
<td>0.002</td>
</tr>
<tr>
<td>H0</td>
<td>Rejected</td>
<td>Not rejected</td>
<td>Rejected</td>
<td>Not rejected</td>
<td>Rejected</td>
</tr>
<tr>
<td>Significant relation</td>
<td>There is a significant relationship</td>
<td>There is no significant relationship</td>
<td>There is a significant relationship</td>
<td>There is no significant relationship</td>
<td>There is a significant relationship</td>
</tr>
</tbody>
</table>

As it is clear from results of Table 4, there is a significant relation between organizational culture and dimensions of personal mastery, shared vision and systems thinking.
Table 5- Matrix of Pierson correlation coefficient of research variables

<table>
<thead>
<tr>
<th>IN</th>
<th>CO</th>
<th>AD</th>
<th>MI</th>
<th>PM</th>
<th>MM</th>
<th>SV</th>
<th>TL</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0/051</td>
<td>0/459</td>
<td>0/092</td>
<td>0/258</td>
<td>-0/056</td>
<td>0/161</td>
<td>0/074</td>
<td>-0/244</td>
</tr>
<tr>
<td>sig</td>
<td>0/516</td>
<td>0/391</td>
<td>0/405</td>
<td>0/000</td>
<td>0/207</td>
<td>0/582</td>
<td>0/053</td>
<td>0/125</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0/391</td>
<td>0/488</td>
<td>0/235</td>
<td>0/267</td>
<td>0/152</td>
<td>-0/081</td>
<td>0/077</td>
</tr>
<tr>
<td>sig</td>
<td></td>
<td>0/000</td>
<td>0/000</td>
<td>0/003</td>
<td>0/129</td>
<td>0/001</td>
<td>0/059</td>
<td>0/323</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0/000</td>
<td>0/000</td>
<td>0/274</td>
<td>0/085</td>
<td>0/010</td>
<td>0/099</td>
<td>-0/083</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0/086</td>
<td>0/274</td>
<td>0/077</td>
<td>0/037</td>
<td>0/329</td>
</tr>
<tr>
<td>sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0/000</td>
<td>0/037</td>
<td>0/000</td>
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<td></td>
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<td></td>
<td></td>
<td>0/000</td>
<td>0/004</td>
<td>0/000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0/000</td>
<td>0/051</td>
<td>0/002</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>0/000</td>
</tr>
</tbody>
</table>

**Conclusion and recommendations**

The results revealed that there is a direct relation between organizational culture and realization degree of learning organization. This means that the Telecommunications Company in Borujerd County moves toward becoming a learning organization by reinforcing the organizational culture. Therefore, the following ways are recommended to reinforce organizational culture:

- Decisions are made at a level that the best information are available.
- Information should be accessible for all so that employees have access to it easily.
- Works should be done in teams rather than in hierarchical form.
- Authorities are granted so that employees can do their tasks.
- Employees' mastery should be improved continuously.
- There should be a stable and clear collection of values to perform works in the organization.
- Employees of various sectors of the organization should have a shared view.
- There must be a similar perception of organizational purposes at all levels in the organization.
- The strategies should be very flexible and can be changed easily.
- The organization shows reaction suitably towards changes in its environment.
- New and improved ways should be used continuously to do works.
- Suggestions and ideas of customers should often be led to change.
- Failure should be regarded as an opportunity for learning and progress.
- Innovation and risk-taking should be encouraged.
- Attempts and actions should be coordinated among different sectors of the organization.
- The organization should have a long-term purpose and orientation.
- A general agreement should be made about purposes of the organization.
- Leaders of the organization determine clear purposes and try to realize them.
- Perspective of the organization should create motivation and enthusiasm in employees.

Results of the secondary hypothesis demonstrate that there is a positive (direct) relation between organizational culture and dimensions of personal mastery and shared vision. This relation is negative (inverse) with systems thinking. Also there is no significant relation between organizational culture and dimensions of mental models and team learning.
References


