Evaluation of University as a Learning Organization (Case Study: Ardakan University Employees)

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Abstract

This study examines the learning organization indexes among the employees of Ardakan University. The indicators are based on the five disciplines of learning organizations in Senge's model; individual capabilities, mental models, building a shared vision, team learning and systems thinking. The statistical population of this research is 44 employees of Ardakan University, all of whom were questioned in this research. In order to carry out this research, first the learning organization questionnaire was prepared and after its validity was verified by experts, the reliability of the questionnaire was measured with Cronbach's alpha, and the value was 0.95. After completing the questionnaire by the employees, the data were entered into SPSS 26.0 software. First, the normality of the data was determined by using the skewness and kurtosis test. Then, based on the one sample T-test, it was confirmed that Ardakan University was in a favorable condition in terms of all the indicators of the learning organization; In other words, Ardakan University is considered a learning organization. Further, the results of the Friedman test also showed that the rank of each of these indicators is not the same, and the system thinking index has the best status and the team learning index has the worst status. Finally, according to the independent t-test and ANOVA, it was found that only the gender variable has a significant relationship with the learning organization.

Keywords: Learning organization, Ardakan University, Peter Senge's questionnaire, Systems thinking index, Team learning index.

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Introduction

In today's world, achieving goals for organizations is considered one of the most important issues due to environmental changes. The lack of confidence due to the increase in environmental changes (including economic, social, political, scientific, cultural changes, etc.), the ever-increasing needs and expectations of humans, have all caused the emergence of a new model called the learning organization (Hosseini & Vakil Alroaia, 2023). Most organizations try not only to continue their lives through learning and training their employees, but also try to effectively influence the chaotic environment around them and realize "learning-oriented" organizational models (Shahnavazi et al., 2023).

The theory of the learning organization has been formed by complementing the theories related to learning and organizational learning. The concept of organizational learning has been developed before the learning organization and was increasingly considered among organizations that were interested in increasing competitive advantage, innovation and effectiveness (Esmaeili et al., 2023).

According to all experts, the main theoretician of the learning organization, Peter M. Senge was from MIT. Senge in 1990, the article "Leader's New Work; Building Learning Organizations" and the book "The Fifth Commandment, The Art and Skill of the Learning Organization" and explained the theory of the learning organization (Arasteh & Enayati, 2010).

University is a vital institution in the development process of any nation and the economic, social, political and cultural development of society is facilitated by the effects of this institution. (Khajeye et al., 2014). In this article, considering the importance of the position of the university in the growth and progress of the current society, the indicators of a learning organization in the university environment have been examined and analyzed. For this purpose, Ardakan University in Iran was chosen as a case study. Based on this, the main research questions are:

1. Is the preparation of Ardakan University desirable to become a learning organization?

2. Is the situation of Ardakan University favorable in terms of the index of individual capabilities?

3. Is the situation of Ardakan University favorable in terms of the index of mental patterns?

4. Is the situation of Ardakan University favorable in terms of the common ideal index?

5. Is the situation of Ardakan University favorable in terms of team learning index?

6. Is the situation of Ardakan University favorable in terms of system thinking index?

Methodology

In this research, after reviewing the literature, a researcher-made questionnaire was used to collect data. This questionnaire, which was designed based on the standard questionnaire of "Senge" learning organization dimensions, consists of two parts; The first part includes demographic items and the second part includes 30 items from the five indicators of the learning organization. A five-point Likert scale was used for scoring. In order to evaluate validity in this research, the questionnaire was reviewed by expert professors and finally approved with minor modifications. Also, in order to evaluate the reliability, first, 10 questionnaires were randomly distributed among the people of the studied society. Cronbach's alpha value was calculated for each dimension as well as the entire questionnaire, which Table 1 shows that all coefficients are greater than 0.7. Therefore, it can be said that the indicators have good reliability.

Table (1) - Cronbach's alpha results

Cronbach's alpha	Number of questions	indicator
0.949	7	individual capabilities
0.879	5	mental patterns
0.790	6	common goals
0.846	7	team learning
0.723	5	system thinking
0.950	30	total items

Ardakan University currently has faculties of humanities and social sciences, agriculture and natural resources, engineering, and a veterinary school. This university is currently active with about 3300 students, 94 faculty members and 44 non-academic faculty members. The statistical population of the current research is the employees of Ardakan University, and due to the centrality of the university and the small size of the population, a total statistical sample of 44 university employees was considered. The data of this research was entered into SPSS 26.0 software and one-sample t, Friedman, independent t and ANOVA tests were performed on them.

Results

Based on the descriptive findings, it was determined that out of 44 employees who completed the questionnaire, 29 were men and 15 were women. The largest range of respondents (around 52.6%) were between 30 and 40 years old. Also, the service history of most people is between 5 and 10 years (47.7%). Among the employees, 10 people had a diploma, 12 people had a bachelor's degree, 21 people had a master's degree, and one person had a doctorate degree. The statistics also showed that the position of most of the employees was expert, assistant expert and responsible expert respectively.

First, the normality of the data was proved by using the skewness and kurtosis test. According to the results of this test and the number of samples, which was 44 people, it can be concluded that the distribution of the indicators in question is normal. In the following, one-sample t-test, Friedman, independent t-test and ANOVA were performed on the obtained data, which are detailed below.

Sample t-tech test

In this test, according to the research questions, the necessary assumptions are designed and each assumption is measured using the t-test. This test is used around the average of a society and in most of the researches that are conducted with the Likert scale, this test is used to check research hypotheses and specialized analysis of questions. According to the assumptions raised for the main questions, a one-sample t-test is performed, which is described below. It should be noted that according to the Likert scale of the answer sheet, the average value of 3 or more was considered as the optimal level of each of the indicators of the learning organization.

The first hypothesis: the status of Ardakan University in the index of individual capabilities of the learning organization is favorable.

The second hypothesis: the situation of Ardakan University in the index of mental patterns of the learning organization is favorable.

The third hypothesis: the situation of Ardakan University in the index of the common goal of the learning organization is favorable.

The fourth hypothesis: the status of Ardakan University in the team learning index of the learning organization is favorable.

The fifth hypothesis: the status of Ardakan University in the system thinking index of the learning organization is favorable.

Sixth hypothesis: the degree of preparation of Ardakan University to become a learning organization is desirable.

These hypotheses were presented in the following statistical form:

H_0: The learning organization is confirmed in the hypothesis. ($\mu \geq 3$)
H_1: The learning organization is not confirmed in the hypothesis. ($\mu < 3$)
Table 2 shows the results of the t-test for the indicators.

					95% Confidence Interval of the Difference	
Indicators	**t**	**df**	**Sig (2-tailed)**	**Mean Difference**	**Lower**	**Upper**
Individual abilities	1.577	43	0.122	0.220	-0.062	0.503
Mental patterns	-1.735	43	0.090	-0.227	-0.491	0.037
Common goal	-1.829	43	0.074	-0.216	-0.454	0.022
Team learning	-1.856	43	0.070	-0.234	-0.488	0.020
System thinking	1.741	43	0.089	0.205	-0.032	0.441
Learning organization	-0.467	43	0.643	-0.050	-0.266	0.166

Table (2) - Sample t-test results — **Test Value=3**

In Table 2, since the value of sig for all five indicators and the learning organization is greater than 0.05, it can be concluded that the learning organization and its dimensions are in a good condition. For assumption number 6, the total average was 2.95. Since the five-point Likert scale was used for measurement, and as stated, the ideal value is 3 or more in this spectrum, so we can consider Ardakan University's readiness to become a learning organization as average. But the things that should be further investigated are mentioned below. The results of hypothesis 6 can be seen in Table 3.

Table (3) - The average value of the entire learning organization

	N	**Mean**	**Std. Deviation**	**Std. Error Mean**
Learning organization	44	2.950	0.710	0.107

Discussion and conclusion

The results of the t-test confirmed Ardakan University's learning ability in terms of five indicators of individual capabilities, mental patterns, common ideal, team learning and system thinking; In other words, this university is in a favorable situation in terms of relevant indicators. Considering that the study was conducted in an educational environment, there was naturally such an expectation from the members of the teaching staff, but the appropriate learning situation among the non-teaching staff indicates the appropriate performance of the

university in the field of organizational learning. Of course, the rapid changes in technology, including educational technology and the rapid coordination of employees with them, as well as the organization's requirement for employees to participate in in-service training courses and specialized courses required by their jobs, have not been unaffected in this field. Friedman's test showed that the five indicators of the learning organization in Ardakan University do not have the same rank; The highest rank was for system thinking and the lowest rank was related to team learning. This result shows that despite the large number of councils in the university for various educational and research issues, these councils did not have the necessary efficiency in the field of learning. It seems that the non-participation of employees in the important decision-makers of the university has reduced the necessary motivation for team learning, and in this regard, the university should add more specialized employee teams to its councils.

Comparing the results of the research with similar works done in Iranian universities, the situation of team learning in the university has been ranked lower, similar to the results of Tehran University (Bejani, 2007). In the results of Tehran, Tabriz (Bejani, 2007) and Allameh Tabatabai (Raste Moghaddam, 2004) universities, there is a significant difference between the current and desired situation. Of course, since the optimal situation in this study was not questioned from the employees' point of view, it is not possible to give an opinion about the distance between the current and the optimal situation, but in general, the scores of Ardakan University were average.

In the continuation of this research, studies can be suggested to investigate the reason for the difference in the perception of women and men about organizational learning. Also, the method used in this research can be used in other universities to analyze the status of the indicators of the learning organization and to propose effective solutions and measures to transform your organization into a learning organization.

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