



## The effect of Organizational Intelligence and Organizational Learning on Performance of staff in Ministry of Petroleum

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### Abstract

**Introduction:** The aim of the current study is to determine the effect of Organizational Intelligence and Organizational Learning on performance of staff in Ministry of Petroleum.

**Materials and Method:** The population is all the Petroleum ministry staff that they were about 5,000 people. The sampling method was systematic random sampling and the sample size of 356 subjects. Research, was descriptive. Three questionnaires, Organizational Intelligent (Albrecht, 2003), Organizational Learning (Weick and Leon, 1995) and a researcher made questionnaire has been used for collecting the information. To data analysis normality K-S Test, Kruskal-Wallis and X2 Test were used.

**Results:** Finding revealed that There is significant positive relationship between Organizational Intelligence ,Organizational learning and performance of staff in Ministry of Petroleum; Also fading reveals that Status of staff Organizational Intelligence and Organizational Learning in Ministry of Petroleum was moderate to high

**Conclusion:** Those staffs that have high Organizational Intelligence and learning and performance have the capability of an organization to comprehend and conclude knowledge relevant to its business purpose an ability to make sense of complex situations and act effectively. Also they have an ability to interpret and act upon relevant events and signals in the environment. Additionally the have the ability to develop, share and use knowledge relevant to its business purpose and ability to reflect and learn from new experience.

## 1. Introduction

Today, Organizational Learning has been taken attention increasingly among Organization to gain a competition advantage, innovation and effectiveness of interest, and various researchers have analyzed it by different approaches. We can call such approaches as psychology approach, social study approach and Organizational Theory. In 1900, the concept of Organizational Learning had been formed when Fredric Talor raised the subject of transferring learning to other staff (Yung and his colleagues, 1999). Albert Richard Siret and Jims March in 1999 were the first ones who put together the concepts of learning as an organized phenomenon (cited in Taheri Rouzbahani et al., 2013). Argris and Schon (1987, cited in Graham, 2006) defined learning as a way of error detection and correction. Dodgson defined the Organizational Learning as a way that Organizations created completely and organized to develop the normal flow of work in relation to knowledge and activities, as well as improve the efficiency of the organization through labor board skills (cited in Lamsa, 2008).

Regarding to Organizational Learning, there are three various but related levels in management topics. First level is individual learning which refers to changing skills, insights, knowledge, attitudes and values; it will be acquired by technology-based training and observation of self-study. Second level is group learning that refers to improving knowledge, skills and competencies which can be especially obtained by group working. The third level is organizational learning. This level indicates of intellectual capabilities and productivity, results in continuous improvement throughout the organization is achieved. Learning system not only provides the best chance for survival, but also marks the success (Marquardt, 2002).

In researcher point of view, the Organizational Learning has different types. Including Argyris and Schön (1996) that has introduced three levels of Organizational Learning: single-loop learning, double-loop learning and learning tricycle. Marquardt (2002) has introduced four types of Organizational Learning such as adaptive, predictive and prospective learning. Fayul and Laylz (1985,

cited in Gorelick, 2005) also have referred to two types learning. Low level and high level learning. Regarding to these prospective, characteristics of Organizational Learning are complex, unplanned, conscious, purposeful, dynamic, continuous, involving and growing processes, which are influenced by the used cultural resources.

Nowadays, Organizations are able to raise that all of its employees for their ability to work, the role of manager is to provide a suitable environment for the learning process.

Organizational Learning is formed based on individual learning and it's shared the Organizational policies, standard operating procedure and cultural norms to the other member of organization.

It should be noted that, in spite of challenges that the organizations facing with, it's essential to pay attention to the intelligence process in order to gain performance and growth through the promotion of study, improving strategic vision, shared destiny, a desire to change, mentality, unity and agreement, application of knowledge and intelligence that they are aspects of the performance pressure (Jamalzadeh, 2009).

Simic (2005) defines the Organizational Intelligence as: "the thinking ability of an organization in order to solve the organizational problems" from his point of view, the intelligence is just the collection of information, experience, knowledge and understanding of issues. Halal (2006) believes that "Organizational Intelligence is the capacity of an organization for knowledge creation, and used strategic application in order to get compatible with their surroundings. Albrecht (2003), the author and designer of Organizational Intelligence in order to succeed in business, refers to have three factors: smart people, smart group and smart organizations. He declares that when the smart people gather in an organization, moves towards idle and stupor. He uses Organizational Intelligence in order to responding and preventing stupor group (Abzari et al., 2006). Albrecht (2003) is provided the definition of intelligence as: "Organizational Intelligence means the capacity of an organization to gathering information and understanding the nature of the environment and

converting data into knowledge”.

Today, we can confidently declare that the identification and application of Organizational Intelligence can improve competitive strength in an organization and distinguish it from other organizations. Organizational Intelligence organizes the ability of control positive and negative changes for achieve success, and having three factors, such as smart people, smart group, and smart organization are essential. In smart organization, all members do their tasks correctly because they are believed in credibility of purposes and they do reasonable balanced between individual and organizational expectations (Faghihi, 2009).

Different researches has been done in the world especially in Iran, in order to study organizational Learning and Organizational Intelligence, such as Mirghafari, who research as “framework of strategic conceptual creating a learning organization by using a simplified intelligence” came to the conclusions that variety of tools introduce for organizations to create, collect, transfer, optimal use of information and implementation of learning organization. Organizational Intelligence is one of these tools that with capabilities and efficient applications and benefit many potential advantages to the organization. Asadi and his colleagues (2009) in a study entitled “the relation between Organizational Learning and performance in physical education” researched the following results” increased continuous learning will caused to increase organizational performance and their increased Organizational Learning will be increased their performance. Herrera (2007) in a research “Assessing Organizational Learning and its effect on the performance of organizational takes” came to the conclusions that continuous learning is the most effective in organizational performance staff.

The present study investigates the effects of Organizational Intelligence and Organizational Learning on the staff of Petroleum Ministry, aims to address the following questions:

1. *Does the Organizational Intelligence have impact on staff performance of Petroleum Ministry staff?*
2. *Does the Organizational Learning have impact on staff performance of Petroleum Ministry staff?*

3. *How is the status of the Organizational Intelligence of Petroleum Ministry staff?*

4. *How is the status of the Organizational Learning of Petroleum Ministry staff?*

5. *How is the status of the performance of Petroleum Ministry staff?*

## 2. Method

The research method in the present study is descriptive and correlational method using nonparametric statistic. At the First step the number of all staff members of Petroleum Ministry was extracted and according to the list and through systematic random sampling 400 people were selected, 20 people were not satisfied to participated in the study and 24 in complete questionnaire were deleted and finally 356 completed questionnaire were remained.

### 2.1. Participants

The population in this study constitutes all the staff members of Petroleum Ministry, whose number is about 5000. Employing systematic random sampling, 356 subjects are determined as sample.

### 2.2. Measurement

Organizational Intelligence questionnaire (Albrecht, 2003) which has six components include: strategic vision, shared destiny, a desire to change, unity and agreement and the application of knowledge and performance were employed for assessing Organizational Intelligence.

Organizational Learning questionnaire (Vic and Leon, 1995) which consists of 20 questions based on five Likert Scales and five components include vision-based leadership, planning / evaluation, acquisition and dissemination of information, creativity, and pragmatism was employed for assessing Organizational Learning. Concerning performance questionnaire, it's assessed through developed researcher's questionnaire which is contained 23 questions about the performance of the employees. The components of this questionnaire include: regulation and discipline, good behavior and deal effectively with clients, working diligently, flexibility, reliability and dandy shy. In the present study, in order to access validity and reliability of these questionnaires it's used some scientists'

comments in validity method of content and it confirmed by supervisor and consultant and for determining reliability of these questionnaires Cronbach's Alpha Method was employed which was (0/72, 0/81, and 0/90) in all three variables.

### 3. Results

*Question1: Does the Organizational Intelligence have impact on staff performance of Petroleum Ministry staff?*

The quality of calculated  $X^2$  in meaningful level 0.05 with release degree 2 is more than critical

quantity  $X^2$  (5.99). So, with the insurance of %95, we concluded that Organizational Intelligence have impact on performance of Petroleum Ministry staff, and the average number in all components especially in performance component shows that all people who have above-intermediate Organizational Intelligence, their performance in compare other staff in Organization is higher. So, there is positive and meaningful relation between Organizational Intelligence and staff performance.

**Table1.** Kruskal-Wallis Test for comparing the effect of Organizational Intelligence on the performance of Petroleum Ministry staff.

component	N	Average No.	$X^2$	df	Sig.	component	N	Average No.	$X^2$	df	Sig.
Official	90	152.35	9.289	2	0.010	Reliability	90	144.81	11.885	2	0.003
Regulation	245	189.59					245	209			
discipline	21	161.14					21	170.16			
Good behaviour	90	132	5.882	2	0.050	Dandy shy	90	138.28	18.700	2	0.000
with clients	245	191.93					245	191.37			
	21	177.55					21	200.69			
Working deli	90	150	20.157	2	0.000	General	90	148.71	32.492	2	0.003
gently	245	220				performance	245	183			
	21	165.69					21				
Flexibility	90	128.36	29.864	2	0.000						
	245	197.49									
	21	171.86									

**Note1:** Responses Levels: Low, average, high

**Note 2:** N,  $X^2$ , df, and sig. stands for number.  $X^2$  test and significance respectively

*Question 2: Does the Organizational Learning have impact on staff performance of Petroleum Ministry staff?*

The quality of calculated  $X^2$  in meaningful level 0.05 with release degree 2 is more than critical quantity  $X^2$  (5.99). So, with the insurance of %95, we concluded that Organizational Learning have impact on performance of Petroleum Ministry staff,

and the average number in all components especially in performance component shows that all people who have above-intermediate Organizational Learning, their performance in compare other staff in Organization is higher. So, there is a positive and meaningful relation between Organizational Learning and staff performance.

**Table2.** Kruskal-Wallis Test for comparing the effect of Organizational Learning on the performance of Petroleum Ministry staff.

component	N	Average No.	$X^2$	df	Sig.	component	N	Average No.	$X^2$	df	Sig.
Official	79	155.68	6.213	2	0.045	Reliability	79	155.78	9.593	2	0.008
Regulation	261	186.68					261	170.51			
discipline	16	157.69					16	209.49			
Good	79	119.72	6.621	2	0.036	Dandy shy	79	146.87	9.669	2	0.008
behaviour	261	178					261	187.44			
with clients	16	191.96					16	188.84			
	79	158.56					79	148.44			

Working deli gently	261 16	218.99 167.47	15.919	2	General performance	261 16	180.42 178.23	33.457	2	0.000
Flexibility	79 261 16	130.87 193.57 167.78	22.754	2	0.000					

**Note 1:** Responses Levels: Low, average, high

**Note 2:** N, X<sup>2</sup>, df, and sig. stands for number. X<sup>2</sup> test and significance respectively

*Question 3: How is the statue of the Organizational Intelligence of Petroleum Ministry staff?*

The quality of calculated X<sup>2</sup> with the release degree of 4 and in meaningful level 0.05 is higher than

critical quality (9.448); so consequently with insurance of %95, the Organizational Intelligence statue of Petroleum Ministry staff is above – intermediate.

**Table3.** The result of X<sup>2</sup> Test related the question 3 of study.

component	Frequency	X <sup>2</sup>	df	Sig	component	Frequency	X <sup>2</sup>	df	Sig
Strategic vision	9				Unity & agreement	10			
	94					74			
	159	233	4	0.000		176	271	4	0.000
	88					90			
	6					6			
Shared destiny	1				Application of knowledge	4			
	95					77			
	172	283	4	0.000		196	333	4	0.000
	82					68			
	6					11			
desire to change	2				Organizational Intelligence (general)	2.00			
	84					3.00			
	202	381	4	0.000		4.00	606	4	0.000
	68					5.00			
	0					10			
mentality	4								
	94								
	200	375	4	0.000					
	57								
	1								

**Note 1:** Responses Levels: Completely rejected, not completely rejected, not completely accepted, accepted, completely accepted

**Note 2:** N, X<sup>2</sup>, df, and sig. stands for number. X<sup>2</sup> test and significance respectively

*Question 3: How is the statue of the Organizational Learning of Petroleum Ministry staff?*

The quality of calculated X<sup>2</sup> with the release degree of 4 and in meaningful level 0.05 is higher

Than critical quality (9.448); so consequently with insurance of %95, the Organizational Learning statue of Petroleum Ministry staff is above – intermediate.

**Table4.** The result of X<sup>2</sup> Test related the question 4 of study.

component	Frequency	X <sup>2</sup>	df	Sig	component	Frequency	X <sup>2</sup>	df	Sig
Vision – based leadership	6				creativity	7			
	89					73			
	198	360	4	.000		202	358	4	.000
	62					68			
	1					6			
	6					20			

Planning /evaluation	87 172 89 2	277	4	.000	pragmatism	76 172 80 8	237	4	.000
Acquisition & dissemination of information	3 88 201 61 3	372	4	.000	Organizational Learning (general)	0 79 261 16 0	692	4	.000

**Note:** Responses Levels: Completely rejected, not completely rejected, not completely accepted, accepted, completely accepted

**Note 2:** N, X<sup>2</sup>, df, and sig. stands for number. X<sup>2</sup> test and significance respectively

*Question 4: How is the statue of the Performance of Petroleum Ministry staff?*

The quality of calculated X<sup>2</sup> with the release degree of 4 and in meaningful level 0.05 is higher than

critical quality (9.448); so consequently with insurance of %95, the Performance statue of Petroleum Ministry staff is above – intermediate.

**Table 5:** The result of X<sup>2</sup> Test related the question 5 of study.

component	Frequency	X <sup>2</sup>	df	Sig	component	Frequency	X <sup>2</sup>	df	Sig
Official Regulation discipline	1 85 237 31 1	551	4	0.000	reliability	9 86 187 70 4	309	4	0.000
Good behaviour with clients	0 63 231 59 2	501	4	0.000	Dandy shy	4 99 217 35 1	460	4	0.000
Working diligently	1 97 219 38 0	473	4	0.000	Performance (general)	1 76 263 15 1	699	4	0.000
flexibility	5 94 183 73 1	313	4	0.000					

**Note:** Responses Levels: Very Low, Low, Average, High, Very High

**Note 2:** N, X<sup>2</sup>, df, and sig. stands for number. X<sup>2</sup> test and significance respectively

#### 4. Discussion

Today is speaking about various kinds of intelligence and Organizational Intelligence means acquisition of knowledge and information from all factors which can influenced on Organizational performance. Another component which effects on Organizational performance is Organizational Learning that it can be said: it's continues process that increases the facilities, knowledge and

Organizational capabilities, and improves Organizational performance (García-Morales et al., 2006). The study results show that regarding to the Organizational Learning and Intelligence components it can be said that, all components of Organizational Intelligence and Learning are good determiners for organization performance. And it's used these components in order to improve Organizational performance. Among Organizational

Intelligence components, the desire to change has the most correlation with Organizational performance, and it means that people who are desired to have good performance, they will do their best till create many changes in their environment and themselves. So the desire to change in Organizational Intelligence is more suitable component. And among all components of Organizational Learning, planning / evaluation have the most correlation with Organizational performance. Those staffs that have high Organizational Intelligence and learning and performance have the capability of an organization to comprehend and conclude knowledge relevant to its business purpose an ability to make sense of complex situations and act effectively. Also they have an ability to interpret and act upon relevant events and signals in the environment. Additionally the have the ability to develop, share and use knowledge relevant to its business purpose and ability to reflect and learn from new experience.

Also Petroleum Ministry staff has the capacity to sense, make sense, and act in flexible, creative, adaptive ways as "collaborative problem-solving between people and technical artifacts within and beyond complex enterprises.

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