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## **PREDICTION OF ORGANIZATIONAL INTELLIGENCE BASED ON ORGANIZATIONAL LEARNING OF EDUCATION OFFICES IN TEHRAN**

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### **ABSTRACT**

The main objective of this study is to investigate the correlation between the Organizational Intelligence and organizational learning departments of education in Tehran City. The research has descriptive method. The statistical population of this study consists of 2000 managers, experts, and also the staff departments of education in Tehran during 2013-14. 400 ones are selected by simple random sampling as the samples according to Morgan Table. Karl Albrecht's Organizational Intelligence questionnaire (2003) and Watkins & Marsick's organizational learning questionnaire (2002) are the measurement tools which are implemented on staff, managers and experts. To determine the validity of measurement tools, the questionnaires are given to three professors in educational administration field and these questionnaires are confirmed in all cases. The reliability of these questionnaires is measured by Cronbach's alpha and its coefficient is found equal to 0.98 for Organizational Intelligence and 0.99 for organizational learning. The data is analyzed at both descriptive and inferential statistics and the results of data analysis indicate that: There is a significant positive correlation between the Organizational Intelligence and organizational learning. There is a significant positive correlation between the dimensions of Organizational Intelligence and organizational learning. The regression equation is as follows:

Organizational intelligence  $6.334+(0.829)=$ organizational learning

Thus, the regression equation is as follows:

Operation pressure (1.36)- Courage(6.91)+ The desire to change(3.39)+ Common fate-11.620 – (2.16)=organizational learning

**Keywords:** *Organizational Intelligence, Organizational Learning*

### **INTRODUCTION**

The organizational learning is the ability of an organization to gain the vision from its own and other organizations' experiences and make the change in the way of performance based on a new vision. The ability to gain vision from others and our own experiences is the key element in organizational learning. The revision of performance results in our organization and the successful ones is the key to gained vision and learning.

The organizational learning is a process under which the members find the errors and take measure to correct them in the organization (Putnam, 2000).

The organizational learning is a process of improving the performance through greater knowledge (Senge, 2003).

#### **Organizational Learning Theory**

According to the emphasis on the fact that the organizations rely on the received feedback like the human mind to adapt to changing environmental conditions, they gain the experience and learning exactly like the intelligent animals and human beings and are more involved in complex mental processes such as the "prediction, identification, definition, designing and problem solving", the organizational learning theory is among the systematic and contingent approaches and considers the organization as an "open living system with vision.

Some organizational theories believe that "some of the organizational learning states are regularly created in some of the organizations" such as three usual processes of organizational learning as follows:

- Measures for improvement and development of human resources

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- Measures for strategic planning
- Applying and dominating the new technologies in the organization

However, the organizations often do not utilize all their learning talents and abilities. The outcome of organizational learning is more than the individual learning of its total components; in other words, the outcome of learning in the whole organization is more than the sum of individual learning and its constituent parts. The individual learning obtained from educating and developing the human resources skills, providing the scientific bases, and familiarity with new theories and frameworks leads to the organizational learning only when it affects the managerial measures, policies, strategies of organizational design.

The organizational learning issue was raised in about the 1970s. Peter Senge's famous book, the Fifth Discipline, led to the reputation and development of open system thinking and organizational learning. According to Peter Senge, the learning organization is an organization which constantly changes its performance and improves it by utilizing the individuals, values and other sub-systems, and relying on the obtained lessons and experiences. According to his view, the main components of any learning organization are as follows:

- Mental models: In such these organizations, all individuals leave the old methods of thinking.
- Personal mastery: In such these organizations, the individuals are self-aware and have open relationship with others.
- Systematic thinking: All members learn how the entire organization works.
- Shared vision: All members identify and define their practical programs and reach an agreement (Tavassoli, 2005).

The organizational intelligence has a different meaning that is generally meant as the intellectual abilities of an organization so as to solving organizational problems and to emphasize the combination of man and technical competencies for the problem solving of the organization and includes a set of data, experience, knowledge and comprehension of organizational problems (Sattari, 2009). As developments have occurred at the global area, now the attention of managers and management theorists has been directed at the intellectual assets of the organizations whereas the organizational intelligence is an intelligent design of the processes, tools, and structures with the intention of increasing the knowledge of renewal, sharing and improving the way knowledge is used where it manifests in any of the three elements of the intellectual capital; i.e. structural, human and social arenas (Rouhan and Jonishi, 2009). In fact, the organizational intelligence aids organizations and particularly the universities and higher educational centers to identify, select, organize and disseminate the information and main skills regarded as the organizational memory and are available as unorganized. This will enable the organization to be efficient and effective for solving learning problems, strategic planning and dynamic decisions (Assi, 2012)

The organizational intelligence places emphasis on the identification of knowledge and its presentation in such away it is shared formally and as a result it is made useable (Glelich, 2006). All the mentioned cases do mean that the improved quality of the organizational intelligence could be an effective factor on the growth and development of the organization, but unfortunately, few researches are done in Iran and this subject is relatively new in the academic arena.

Epistemological perspective: Some experts have considered the organizational intelligence from an epistemological point of view. The cognitive perspective, behavioral perspective and the social-emotional perspective are the three categories of the organizational intelligence and the overall aim is to know how much of a fusion of different thinking schools could present a comprehensive understanding of the organizational intelligence in management and literature of the organizational development. The organizational intelligence is a social process whose cornerstone theories are based on the theories of pure personal intelligence neglected up to now.

The application of the personal intelligence has not in its turn managed to specify the social nature of the organizational intelligence (Azizi, 2007).

Matsuda perspective: The organizational intelligence is a complex, interactive, accumulative and coordinating set of human and machine intelligence of an organization as a whole. He also states that the

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organizational intelligence includes two concepts: as a process and as a product. The organizational intelligence as a product considers the quality of designing information networks in accordance with the organizational intelligence. The organizational intelligence as a process means analysis, designing and analysis for the effective performance of the organizational knowledge and some information processes as we as solving organizational problems. The organizational intelligence as a process is specified by three features: interaction, accumulation and coordination (Matsuda, 1992).

Libowitz perspective: For him, the organizational intelligence is a set of all the smartness applied as to create a shared perspective, process of renewal (review) and navigation of the total system (Azizi, 2007).

Simik perspective: For him, the organizational intelligence is the intellectual abilities of an organization for solving organizational problems whose concentration is on the mixing the human and technical abilities for problem solutions (Canibano, 2009).

Given the importance of organizational intelligence and organizational learning in department of education, the determination of relationship between the organizational intelligence and organizational learning among the employees at departments of education in Tehran is among the main objectives of this research.

## MATERIALS AND METHODS

The research has the descriptive-correlative method. The statistical population of this research consists of 2000 managers and employees at departments of education in Tehran and 400 samples are selected by simple random sampling according to Morgan Table.

Measurement tool: The following methods are utilized for data collection:

Library studies: The library resources, the articles, required books and also the global information network are utilized to collect data on the theoretical principles and research literature.

Two questionnaires are utilized after the library study proportional to the theoretical principles. Karl Albrecht's Organizational Intelligence questionnaire (2003) and Watkins & Marsick's organizational learning questionnaire (2002) are the measurement tools which are implemented on staff, managers and experts.

Validity and reliability of questionnaire: Despite the fact that the mentioned questionnaires are standard, their validity and reliability are determined for greater reliability:

The obtained alpha coefficient for each of research indexes

| Index                       | Cronbach alpha coefficient |
|-----------------------------|----------------------------|
| Organizational Intelligence | 0.98                       |
| Organizational Learning     | 0.99                       |

The Cronbach alpha coefficient obtained for research indices are higher than 0.70 indicating the internal correlation between the variables to measure the target concepts, thus it can be concluded that our research has required validity and reliability.

To determine the validity of measurement tools, the standardized questionnaires are given to three educational administration professors and all cases are confirmed. The frequency tables and also the bar and pie charts are utilized to describe the findings.

Moreover, the central and dispersion indices are utilized for better description of data and thus the statistical indices such as the frequency, percentage, mean, variance and standard deviation are applied at this descriptive level. The correlation coefficient and multivariate regression are utilized at the inferential statistics.

## RESULTS AND DISCUSSION

### Results

First question: is there any relation between organizational intelligence with organizational learning of Education staff in Tehran?

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**Table 1: Summary results of the regression on the relationship between organizational intelligence with organizational learning**

| Multiple correlation coefficient | The coefficient of determination | of Adjusted coefficient determination | Standard error of estimates |
|----------------------------------|----------------------------------|---------------------------------------|-----------------------------|
| 0.959                            | 0.919                            | 0.919                                 | 8.968                       |

The results of the table showed that multiple correlation coefficient of  $R = 0.95$  and the coefficient of determination equal to  $R = 0.91$  Square and the coefficient of determination adjusted to  $R = 0.91$  is calculated. ( $F = 4346.530, P = 0.05$ ). The coefficient of determination can be explained by observing that 91% of the variability in total organizational Intelligence learning in education institutions accounted Tehran.

**Table 2: An Ova**

|            | Set squares | Degree of freedom | Mean square | F        | Significant level |
|------------|-------------|-------------------|-------------|----------|-------------------|
| Regression | 349564.772  | 1                 | 349564.772  | 4346.530 | 0.000             |
| Remaining  | 30882.765   | 384               | 80.424      |          |                   |
| Sum        | 380447.536  | 385               |             |          |                   |

Significant level given in the table according to the value of  $f$  equal 4346.530, the level is significantly lower than 0.05 confirming regression model is able to predict changes in the dependent variable is the independent variable.

**Table 3: Variables related to the regression coefficients**

| Independent variable        | Not standardized coefficients |                    | Standardized coefficients Beta | t      | Significant level |
|-----------------------------|-------------------------------|--------------------|--------------------------------|--------|-------------------|
|                             | B                             | The standard error |                                |        |                   |
| Constant                    | -6.334                        | 1.827              |                                | -3.467 | 0.000             |
| Organizational intelligence | 0.829                         | 0.013              | 0.959                          | 65.928 | 0.000             |

As it can be seen in the table multiple correlation between organizational intelligence organizational learning that business intelligence with the beta 95/0 is the explanation of the dependent variable In other words, per one standard deviation increase organizational intelligence, the 0.95 is the standard deviation increase in organizational learning.

According to the analysis by regression equation is:

Organizational intelligence  $6.334 + (0.829) =$  organizational learning

Second question: is there any relation between Dimensions of organizational intelligence with organizational learning of Education staff in Tehran?

**Table 4: Summary results of the regression on the relationship between dimensions of organizational intelligence with organizational learning**

| Multiple correlation coefficient | The coefficient of determination | of Adjusted coefficient determination | Standard error of estimates |
|----------------------------------|----------------------------------|---------------------------------------|-----------------------------|
| 0.971                            | 0.943                            | 0.942                                 | 6.594                       |

The results of the table showed that multiple correlation coefficient of  $R = 0.97$  and the coefficient of determination equal to  $R = 0.94$  Square and the coefficient of determination adjusted to  $R = 0.94$  is

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calculated (F=794.847,P=0.05). The coefficient of determination can be explained by observing that 94% of the variability in total organizational Intelligence learning in education institutions accounted Tehran.

|            | Set squares | Degree of freedom | Mean square | F       | Significant level |
|------------|-------------|-------------------|-------------|---------|-------------------|
| Regression | 241933.699  | 7                 | 34561.957   | 794.847 | 0.000             |
| Remaining  | 14523.170   | 334               | 43.483      |         |                   |
| Sum        | 256456.868  | 341               |             |         |                   |

Significant level given in the table according to the value of f equal to 794.847 level is significantly lower than 0.05 confirming the regression model and suggests that a common fate variables tend to change, courage and performance pressure are a significant relationship with the dependent variable.

**Table 6: Variables related to the regression coefficients.**

| Independent variable     | Not standardized coefficients | Standardized coefficients | t      | Significant level |       |
|--------------------------|-------------------------------|---------------------------|--------|-------------------|-------|
| Constant                 | B                             | The standard error        | Beta   | -5.805            | 0.000 |
| Strategic Insight        | -11.620                       | 2.002                     |        | -1.749            | 0.081 |
| Common fate              | -1.140                        | 0.652                     | -0.155 | -3.199            | 0.002 |
| The desire to change     | -2.168                        | 0.678                     | -0.334 | 8.389             | 0.000 |
| Courage                  | 3.397                         | 0.405                     | 0.560  | 12.079            | 0.000 |
| Alliance agreement       | 6.916                         | 0.573                     | 1.087  | 1.106             | 0.269 |
| Application of knowledge | 0.145                         | 0.131                     | 0.027  | 0.278             | 0.781 |
| Operation Pressure       | 0.059                         | 0.212                     | 0.010  | -2.635            | 0.009 |

As seen in the table is a multiple correlation between the dimensions of organizational intelligence and organizational learning that a common fate with the beta -0.33 and want to change the amount of beta 0.56 and courage of the beta 1.08 and the pressure of performance with the beta -0.22 power to explain the dependent variable. In other words, a common fate for one standard deviation decrease in the amount of -0.33 SD increase in organizational learning occurs reverse and significant correlation between the two variables is established, And for one standard deviation increase in the desire to change the 0.56, standard deviation increase in organizational learning to occur, and for one standard deviation increase in courage 1.08 SD increase in organizational learning are commonly in other words, for one standard deviation decrease in pressure, performance, The amount of 22/0-SD increase in organizational learning occurs reverse and significant correlation between these two variables Stowe between strategic vision and unity and agreement and application of knowledge There was no significant relationship with organizational learning.

According to the analysis by regression equation is:

$$\text{Operation pressure (1.36)- Courage(6.91)+ The desire to change(3.39)+ Common fate-11.620 - (2.16)=organizational learning}$$

**Discussion**

The first results showed that the organizational intelligence, organizational learning and education employees in offices in Tehran, there was a significant relationship which indicates that the variable of

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organizational intelligence in total 91% of variability in organizational learning and education employees in offices in Tehran explained. The result of this study is compatible with Salasel and partners, Hassan (2010) also concluded that changes in the dependent variable (OL) in order to be effective components of a feeling, a sense of confidence, a sense of choice and then explains the feeling of being valuable. The second study showed that between some aspects of organizational intelligence with organizational learning and education offices in Tehran, there is a significant relationship Which suggest that the variables common fate, the desire to change, courage and performance pressure are a significant relationship with the dependent variable. The result of this study is compatible with Salasel and partners, Hassan (2010). Salasel and his partners the research concluded that the business intelligence components, components common destiny and spirit with positive and significant organizational citizenship behaviors ( $0.01 > p$ ) and with regard to the desire to change the organizational citizenship behavior and significant negative relationship ( $0.01 > p$ ). Practical knowledge, components, performance pressure, alliances and agreements and strategic vision also showed a significant relationship ( $0.05 > p$ ). If the study confirms the significant level of less than 05/0 that suggests regression and suggests that variables common fate, the desire to change, the courage and the pressure of a significant relationship with the dependent variable. And strategic vision and agreement between the variable and application of knowledge organizational learning is no significant relationship was.

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