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PREDICTION OF SOCIAL CAPITAL BASED ON THE ORGANIZATIONAL LEARNING AT DEPARTMENTS OF EDUCATION IN TEHRAN

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ABSTRACT

The main objective of this study is to investigate the correlation between the social capital and organizational learning departments of education in Tehran City. The research has descriptive method. The statistical population of this study consists of 1900 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. Nahapiet and Ghoshal's social capital questionnaire (1998) 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 advisor and supervisor professors and two 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 social capital 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 social capital and organizational learning. There is a significant positive correlation between the dimensions of social capital and organizational learning. The regression equation is as follows:

Organizational learning = $-15.151 + (1.909) \text{ Social capital}$

Thus, the regression equation is as follows:

Organizational Learning = $-11.662 + (1.73) \text{ relational capital} + (6.68) \text{ cognitive capital}$

Keywords: *Social Capital, Organizational Learning*

INTRODUCTION

There are two discussed subjects about the concept of social capital according to the providers' views: first, those who have studied the whole small or large human communities such as: school, city and community, and paid attention to (social integration) and (social cohesion) in their studies, and then those have re-investigated the concept of (social structure) by evaluating the correlation between the individual and society as well as its impact on the individual and his behavior and have sought to reveal less and more recent dimensions of the undeniable role of this social phenomenon in society.

A- Hanifan is the first author who has utilized the "social capital" term (Putnam, 2000). This Virginian obscure training instructor (West Virginia) (1916) has investigated the educational system problems in his country, the United States and utilized the "social capital" term to explain the observed changes in students' social relationships.

According to the main core of Hanifan's views, there is a close correlation between the (social capital) and (social relations) and the (social capital) lies in (social relations). This perception of (social capital) term is the basis for all discussions which are raised after Hanifan, thus, it has provided the infrastructure for involving this term in various fields of social sciences though with different practices (Ejtehad, 2007).

Dimensions of Social Capital

The definitions of social capital imply the multi-dimensional nature of this concept. One of the researchers has pointed out that the conceptualization of social capital dimensions in separate words (regardless of the relationship and interaction between these dimensions) leads to the failure in empirical studies (Newton, 1997). The inability to explain and design the empirical questions about the interaction

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between these dimensions lead to the limitation in identifying the unified concept of social capital (Stone, 2000).

Cognitive Dimension of Social Capital

The cognitive dimension of social capital is less measureable, thus there is no significant success in the relevant literature and measurement of social capital. In some papers, the social capital is synonymous with culture-building assumptions because both of them pay attention to the shared values among the members in a group. Here, two major components of cognitive aspect are mentioned as the common language and narratives.

Structural Dimension of Social Capital

The structural dimension of social capital includes the models of links between the group members, combination of network organization, and also the appropriable organization. Here, the network refers to the members in a group or organization. Some studies of social capital have investigated its structure.

Relational Dimension of Social Capital

For most of the authors, the development of social capital is not only limited to the relationship and links within a network, but there are also positive interactions among the individuals in the network and they lead to the creation of social capital (Seyed, 2005).

Organizational Social Capital

The organizational social capital is a source of social relationship features within the organization and it is known through the members' orientation of collective goals and mutual trust and it creates value through facilitating the successful collective action and is an asset which can be useful for both organization and members in the organization (Bourdieu, 1999).

Organizational Learning

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
- 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.

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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).

Given the importance of social capital and organizational learning in department of education, the determination of correlation relationship between the social capital 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 1900 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. Nahapiet & Ghoshal social capital questionnaire (1998) is the first questionnaire and it has three cognitive, relational and structural dimensions consisting of 24 questions. Standard questionnaire is applied for organizational learning and it has three dimensions of individual, group and organizational learning including 43 items.

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
Social Capital	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 advisor and supervisor professors and two 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.

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RESULTS AND DISCUSSION

Results

Table 1: Distribution of central and dispersion indices of social capital variable and its dimensions

Statistical indices	Social Capital	Cognitive	Relational	Structural
Mean	64.56	15	27.93	21.35
Median	66	15	27.93	21.35
Mode	66	15	27	21
Standard deviation	17.269	3.221	5.477	4.469
Range of changes	86	11	21	16
Minimum score	2	9	17	12
Maximum score	88	20	38	28
Total	25435	5624	10112	8026

The central indices of mode, median, and mean for score of social capital variable and its dimensions indicate the proximity to normal distribution due to the proximity of their numeric values. The minimum score of "social capital" belongs to those who have obtained the score of 2 and the maximum score belongs to those who have obtained the score of 88 with total score of 25435. Therefore, the distribution range of scores is equal to 86.

The social capital score is more than 66. The social capital score for a half of respondents is equal to or less than 66 and the other half is more than this score. The average score of "social capital" for statistical sample is equal to 64. Given the value of standard deviation, the "social capital" scores distribution equal to 17 units is distributed around the mean

Table 2: Distribution of central and dispersion indices for organizational learning variable and its dimensions

Statistical indices	Organizational learning	Individual learning	Group learning	Organizational learning
Mean	110.30	33.99	15.13	61.59
Median	109	33	12	64
Mode	109	33	12	44
Standard deviation	31.435	8.854	4.866	17.760
Range of changes	161	50	18	65
Minimum score	1	1	6	22
Maximum score	162	51	24	87
Total score	42577	13120	5808	23649

The central indices of mean, median and mode for score of organizational learning and its dimensions indicate the proximity to normal distribution due to the proximity of their numerical values to each other. As shown, the minimum score of "organizational learning" belongs to those who have obtained the score of 1 and the maximum score belongs to those who have obtained the score of 162 and its total score is equal to 42577. Therefore, the distribution of scores is equal to 161. The organizational learning score for most of the individuals is equal to 109. The organizational learning score is equal to or less than 109 for a half of respondents and the other half is more than the score. Average score of "organizational learning" for statistical sample is equal to 110. Due to the standard deviation, the "organizational learning" distribution equal to 31 units is distributed around the mean.

First Question: Is there a correlation between the social capital and organizational learning in employees at departments of education in Tehran City?

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Table 3: Summary of regression results about the correlation between the social capital and organizational learning

Multiple correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.935	0.874	0.874	11.194

The results of Table (3) indicate that the multiple correlation coefficient is equal to 0.93, and the coefficient of determination equal to 0.87, and the adjusted coefficient of determination equal to 0.87 ($F=2652.047$ and $p=0.05$). Therefore, the observed coefficient of determination indicates that the social capital variable totally explains 0.87% of variance in employees' organizational learning at departments of education in Tehran.

Table 4: ANOVA

	Sum of squares	Degree of Freedom	Mean square	F	Significance level
Regression	332328.432	1	332328.432	2652.047	0.000
Residual	48119.105	384	125.310		
Total	380447.536	385			

The significance level presented in Table (4) is less than 0.05 according to the f-value of 2652.047 and this indicates the confirmed regression model and thus the independent variable is able to predict the variance in dependent variable.

Table 5: Coefficients of variables in regression equation

Independent Variable	Non-standardized Coefficients B	Standard error	Standardized coefficients Beta	t	Significance level
Constant value	-15.151	2.502		-6.056	0.000
Social capital	1.909	0.037	0.935	51.498	0.000

As shown in Table (5), the Multiple Correlation between the social capital and organizational learning indicates that the social capital with beta of 0.93 is able to explain the dependent variable; in other words, with one unit increase in social capital, the standard deviation is increased by 0.93 in organizational learning.

According to the coefficients of Table (5), the regression equation is as follows:

Organizational learning = $-15.151 + (1.909) \text{ Social capital}$

Second Question: Is there a correlation between the dimensions of social capital and organizational learning at departments of education in Tehran?

Table 6: Summary of regression results about the correlation between dimensions of social capital and organizational learning

Multiple correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.934	0.872	0.870	9.992

The results of Table (6) indicate that the multiple correlation coefficient is equal to 0.93, and the coefficient of determination equal to 0.87, and the adjusted coefficient of determination equal to 0.87 ($F=807.074$ and $p=0.05$). Therefore, the observed coefficient of determination indicates that the dimensions of social capital variable totally explain 0.87% of variance in employees' organizational learning at departments of education in Tehran.

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Table 7: ANOVA

	Sum squares	of Degree Freedom	of Mean square	F	Significance level
Regression	241720.814	3	80573.605	807.074	0.000
Residual	35640.798	357	99.834		
Total	277361.612	360			

The significance level presented in Table (7) is less than 0.05 according to the f-value of 807.074 and this indicates the confirmed regression model and thus the independent variables are able to predict the variance in dependent variable.

Table 8: Coefficients of variables in regression equation

Independent Variable	Non-standardized Coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	-11.662	2.901		-4.020	0.000
Cognitive capital	6.689	0.788	0.765	8.488	0.000
Relational capital	1.737	0.436	0.342	3.984	0.000
Structural capital	-1.128	0.640	-0.169	-1.762	0.079

As shown in Table (8), the Multiple Correlation between dimensions of social capital and organizational learning indicates that the relational capital with beta of 0.34 and the cognitive capital with beta of 0.76 are able to explain the dependent variable; in other words, with one unit increase in relational capital, the standard deviation is increased by 0.34 in organizational learning and a one unit increase in cognitive capital leads to the increase of 0.76.

Organizational learning= -11.662+ (1.73) relational capital+ (6.68) cognitive capital

Discussion

According to the first finding of this research, there is a significant correlation between the social capital and organizational learning in employees at departments of education in Tehran. Therefore, the observed coefficient of determination indicates that the social capital is able to explain a total of about 0.87 percent of variance in employees' organizational learning at departments of education in Tehran. These results are consistent with the findings by researchers such as Behrouz (2006), Seyed and Feizabadi (2010), Shirvani (2004), Mohammadi (2006), Geramipour and Feiz (2007), Beheshtirouy (2010), Hazrati (2010), Grinson and Visser (2011), Mishra and Bhaskar (2010), and John (2008). John conducted an article entitled as "social capital and student learning" using the collected data from the fourth grade public schools in four cities in Latin America and he has concluded that according to the empirical analysis of social capital, the social capital among the school teachers, between the teachers and students and among the students in a classroom has a substantial contribution in investigating the learning and the possibility of promotion and progress. Furthermore, the social capital among the students is at least as important as the social capital in teacher. Children learn from each other and the networks which make this issue can be very important. The usual pressure on teachers to achieve the desired scores in mathematics and reading has led the teachers towards the (education for test).

According to the second finding of study, there is a significant correlation between dimensions of social capital and organizational learning in employees at departments of education in Tehran. The coefficient of determination indicates that the dimensions of social capital totally explain 0.87 percent of variance in organizational learning as the dependent variable at departments of education, in Tehran. The results of this study are consistent with the findings by researchers such as Behrouz (2006), Seyed and Hourieh (2010), Ahmadi (2004), Shirvani (2004), Geramipour and Feiz (2007), Beheshtirouy (2010), Viri (2010), Gerinson and Visser (2011), Mishra and Bhaskar (2010), and John (2008). Alireza (2004) has concluded in his study that there is a correlation between the social capital and rate of participative activities,

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attention to employee education and empowerment, flexible and non-bureaucratic structure, social responsibility and accountability. Hazrati (2010) has concluded in his research by data analysis that there is a correlation between the organizational learning and readiness for organizational change and commitment. Generally, there is stronger correlation between the organizational learning and organizational commitment and particularly with affective commitment than other components. Furthermore, the results indicate that the demographic factor of gender creates no significant difference at the level of organizational learning and readiness for organizational commitment and change.

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