

# Presentation of a model to study the effect of intellectual capital and mediating role of learning on creativity of teachers of primary schools, district 1, Ahwaz

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**Abstract:** The current study is aimed at investigating the effect of intellectual capital on creativity of the staff through organizational learning mediation among the teachers of primary schools of district 1, Ahwaz. The statistical society was 181 teachers. Three standard questionnaires were used to collect research data. The data were analyzed using Lisrel 8.7 software. The results of structural equation modelling showed that there is a positive and significant relation between the effect of intellectual capital on organizational learning and staff creativity.

**Key Words:** Intellectual capital, organizational learning, creativity, structural equation

## INTRODUCTION

Nowadays, very quick, vast, deep and complicated changes of environment govern the atmosphere of organizations, particularly the science-based institutions such as Department of Education that has to have more adaptability with the variant scientific and environmental conditions. That is why it should join a vigilant learning current ASAP. Today the directors and leaders of organizations have found out to look at learning as a valuable phenomenon and to train the organization so well and effectively to build a better future and to coordinate with different ideas to survive. Organizational learning is a lifelong process and has many definitions. From individual point of view, learning is accessing information, understanding it and acquiring skills. From organizational point of view, learning is focused on gaining traditions, attitudes, strategies and transfer of concentrated knowledge. Learning is accompanied by innovation, diagnosis, creativity, discovery and production of new knowledge. The successful organization is the one that has sufficient attention to human workforce and invest on human workforce. It is a force that could become more creative, enhance entrepreneurship and be equipped with up-to-date knowledge and skills. Creativity is a process that consists of sensitivity toward issues, shortages, restrictions and mal-coordination. It is a sensitivity which is followed by seeking solutions to the problems and raising hypotheses for this purpose. Then the hypotheses are tested and adjusted and the final result is gained. He mixed the element of freshness with the principle of usefulness and believes that creativity is a process to solve problems and it consists of the stages to spot the problem, to seek solution and to build hypothesis regarding the shortcomings of re-testing hypotheses and linking results. On the other hand, the intangible aspect of economy is based on intellectual capital and its initial and main substance is the knowledge and learning capacity. In other words, it could be said that nowadays management guides the intellectual capitals of organizations and institutions toward success in the future (Bidakhti et al, 2013).

According to what was said, the following questions are raised: Can intellectual capital establish creativity in the staff? Do we understand creativity despite learning? Can intellectual capital and mediatory role of learning affect creativity of the staff?

### Theoretical grounds of research

The word 'intellectual capital' initially entered the business literature in 1990s and raised the important role of intellectual capital for its readers, mainly considered as the senior directors of the organizations by publishing an article under the title of 'power of mind' . From then onward, not only hundreds of articles were published regarding this topic, but also many directors of organizations seek finding solutions to identify the value of their intangible assets and to promote the level of performance of an organization and to use these assets suitably. Although there are differences in the writing of researchers and experts of this area and each deal with the discussion of intellectual capitals from different angles and present different ideas in this regard, the main framework and

components of intellectual capital are completely clear and are not as vast and ambiguous as it seems. The approaches toward intellectual capital are classified into several groups (Roos and Roos, 1997).

**Knowledge and learning:** The individuals that are classified in this group are not only interested in intellectual capitals and hidden knowledge of human resources, but also they are mainly after identifying and discovering the knowledge and new methodology to be able to design creative processes for the organizations.

**Knowledge management:** This word is often used for the concept of information and computer systems. The ones that look at intellectual capital from this angle deal with the discussion of data and information and coding and decoding methods from these data and information and intend to use methods to use the information more efficiently.

**Shareholders:** The attention of this group of individuals toward intellectual capitals is merely due to their financial incentives and they intend to find organizations that are more valuable as far as intellectual capitals are concerned in order to be able to invest their financial resources with more certainty. The interest of this group is mainly concentrated on increased profitability and promoted position of strategic business using concentrated intellectual capitals.

**Directors of organizations:** This group of individuals manages the intellectual capitals of the organization and their concentration is supposed to be able to manage these assets in a better way so that they use their potentials to create liquidity and improve the business performance. The directors of organizations consider long-term future to gain profit and are after creating sustainable competitive advantage for an organization.

At present, the main challenge of the directors of 'science-based' institutions such as higher education ones is to prepare suitable environment for the growth and development of humans' mind. Thus, the ability of intellectual capitals management changes to fundamental skills of directors in these organizations (Daft, 1998). In the past century, the academia have shown special attention to the role of 'organizational learning' in universal competitiveness in the 21<sup>st</sup> century.

Intellectual capital is a set of science-oriented assets that are allocated to an organization and is considered as part of its specifications and leads remarkably to the improvement of the competitive position of the organization through adding value to the key beneficiaries of the organization (Marr and Juvani, 2001). The dimensions of intellectual capital are: 1. human capitals: human capitals are defined as the existing individual knowledge, skills, abilities and experiences in the staff of an organization to create value and resolve the issues of an organization (Norma, 2005). Most of the theoreticians who find human capital as the goal of their study look at it at individual level and see it as a mixture of knowledge, skill, intelligence and talent of individuals regardless of what exists in the organization's body. For example, Pening et al find the human capital of an organization the knowledge and skills of the experts of that organization that uses it to present professional services (Stuart, 2006). 2. Structural capital: Structural capital refers to the existing structures and processes within an organization which is used by the staff through which they use their knowledge and skills (Bontis et al, 2000).

This capital consists of mechanisms and structures whose main role is to support the staff to reach an optimal intellectual performance and on the other hand an optimal performance in business. In fact this capital consists of all non-human knowledge reserves in one organization such as databases, processes, strategies and organizational charts that add further value to an organization than just physical assets, 3. Relational capital (customer): The origin of relational capital is the relation among the existing individuals in a special group. While the relations among individuals are introduced as a key factor, the level in which this relation is established is vastly different from others' studies. Pening had a vast concept in mind and described it as relations with different economic beneficiaries, particularly potential customers. This type of relation is formed in different directions. This capital is considered as the principal part of the intellectual capital and is the placed and existing value in marketing and communicational channels through which the organizations run their business (Welbourn, 2008)

### **Organizational learning**

Learning is the main origin of a competitive advantage. Learning is for change, in other words, learning in every organization should change to a development and the positive development to a habit. In this direction, successful organizations have set special points and solutions on the top of their economic activities in order to achieve their goals among which abundance by the idea to serve the customers or being customer-oriented and having insightful organizational culture could be named. Nowadays, correct management of human resources is so important that other management issues are at further levels and in order to train human resources, establishment of conditions that help grow the learner organization is a fundamental necessity (Mirshahi, 2009).

For this reason in the current era, successful organizations are the ones whose directors do whatever they can to promote the abilities of their human resources. Organizational learning is a process and set of actions that

leads to staff learning and consists of specific organizational behavior which is implemented in the learner organization. In these organizations, all learning conditions are provided for the members and the individuals regularly try to put what they have learnt into practice (Khalili et al, 2004).

Dajeston, 1993 defines organizational learning in this way: It is a method that the organizations establish, complete or organize so that they develop knowledge and ordinary currents of work in connection with their activities within their cultures as well as efficiency of an organization through improvement and use of vast skills of their workforce and help organizational promotion by creating structures and strategies.

Amrollahi, 2004 says that organizational learning is the process to improve the performances through knowledge and more understanding.

Qahremani, 2004 says that organizational learning consists of individual and group interactions at organizational level.

Ahmadi, 2005 says that organizational learning is as one of the strategic tools for achieving success for the purpose of design and implementation and is a set of actions that leads to the staff learning.

### **Creativity**

Creativity is a cognitive process whose objective is to create thoughts, concepts, goods or new discoveries. Creativity is a mixture of the new ideas and concepts and the existing ideas and plans through re-structuring and mixing them in an unexpected and skipping way (Rezaeian, 2001). To define creativity from organizational perspective, it means to present new ideas and plans and to improve and promote the quality and quantity of organization's activities (such as increased productivity or presentation of newer products and or services) (Christina et al, 2008). A creative and innovative organization is the one where creativity technology and organizational innovation are institutionalized there and use the model of innovative networks. A creative and innovative organization has three characteristics. Firstly, it has regular creative and innovative processes, secondly, it has widespread and inclusive creative and innovative processes and thirdly, creative and innovative processes are considered as the basis and ground of the social reality of the organization (Shams, 2010).

### **Research History**

Bannany, 2008 found out in his study that the two human resources and relational capitals have positive effect on market book value of the company. In this study, the results indicate the strong relation between relational capital and human resources.

Persikll, 1994 believed that the reason for the failure of the organizations in learning is because they failed in regular development and learning of their staff. He established the learner organization by presenting a model to use the actual organizational learning ideas.

Amin Bidakhti et al, 2013 conducted a study aiming at investigating the effect of intellectual capital on knowledge sharing with mediation of the organizational learning among staff and directors of Amir Kabir University. According to the obtained results, intellectual capital has a positive and significant effect on knowledge sharing and organizational learning.

Maanavipour et al, 2010 conducted a study aiming to investigate the relation between directors' creativity and staff learning among the non-governmental factories of Garmsar. The results showed that there is a significant statistical relation between the degree of expansion in parameters of directors' creativity as well as the total level of directors' creativity and organizational learning of the staff.

Sheikholeslami and Razavieh, 2005 described the goal of this study as investigation of the relation between external motivation and creativity of the students of Shiraz University. The results showed that there is no significant relation between the external motivation & gender and students' creativity, but there is a positive and significant relation between internal motivation and the degree of students' creativity.

## **RESEARCH METHOD**

This study seeks to investigate the effect of intellectual capital on creativity of the staff with mediatory role of organizational learning. The current study is of applied type as far as its objective is concerned and is of descriptive and analytical type as far as data collection is concerned. The statistical society of this study is all the teachers of primary schools of district 1, Department of Education of Ahwaz that were more than 340 out of which 181 teachers were selected randomly using Cochran formula and Morgan table. In order to collect data, survey method was used. Standard questionnaires including intellectual capital, organizational learning and creativity were

distributed and each of the three questionnaires were used according to Likert spectrum (fully disagree: 1 and fully agree: 5).

In this study, in order to determine the reliability of the tools, Cronbach's Alpha was used and the obtained results were shown on table 1. The conceptual validity, i.e., quality and quantity of questions were studied by the experts. For this purpose, some questionnaires were made available to some university teachers and the suggested revisions were made to them. In the current study to make sure about the validity of the structure, confirmatory factor analysis and mechanism was used.

Table 1: Cronbach's Alpha Coefficient of Questionnaires

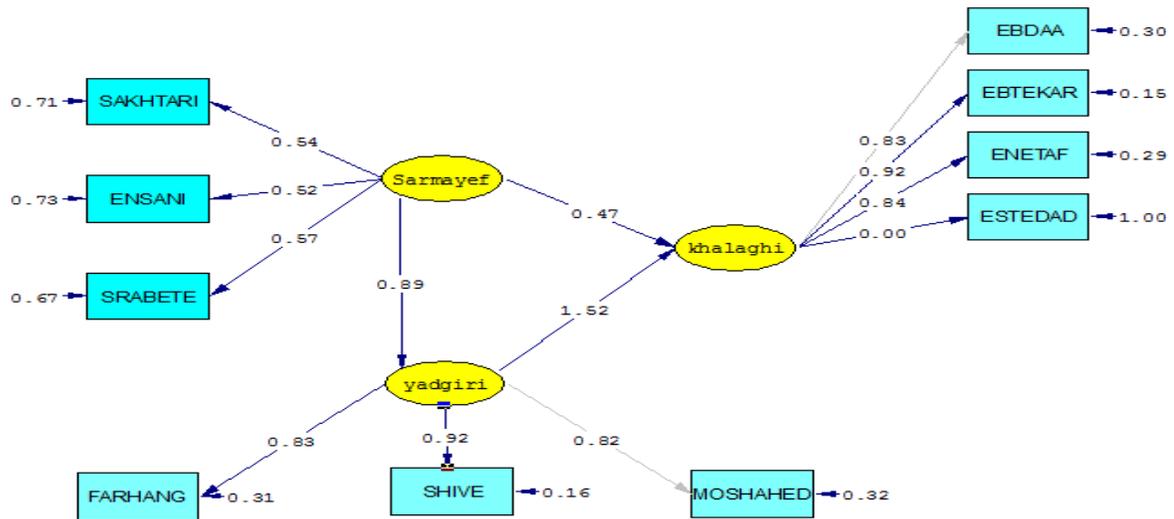
Cronbach's Alpha	Number of questions	Type of questionnaire	Variable
0.906	53	Standard	Intellectual capital
0.853	31	Standard	Organizational learning
0.884	50	Standard	Creativity

**Research findings**

In order to test the research hypotheses, structural equation modelling and route analysis were used. The route chart can be considered as a means to show which variable makes changes to the other variables. If a model which is drawn in form of a chart is approved by the indicators of fitting, that chart of route analysis could be used to test the hypotheses. Thus the first step is to determine the model fitting, but considering table 2, the indicators show the fitting of the research model.

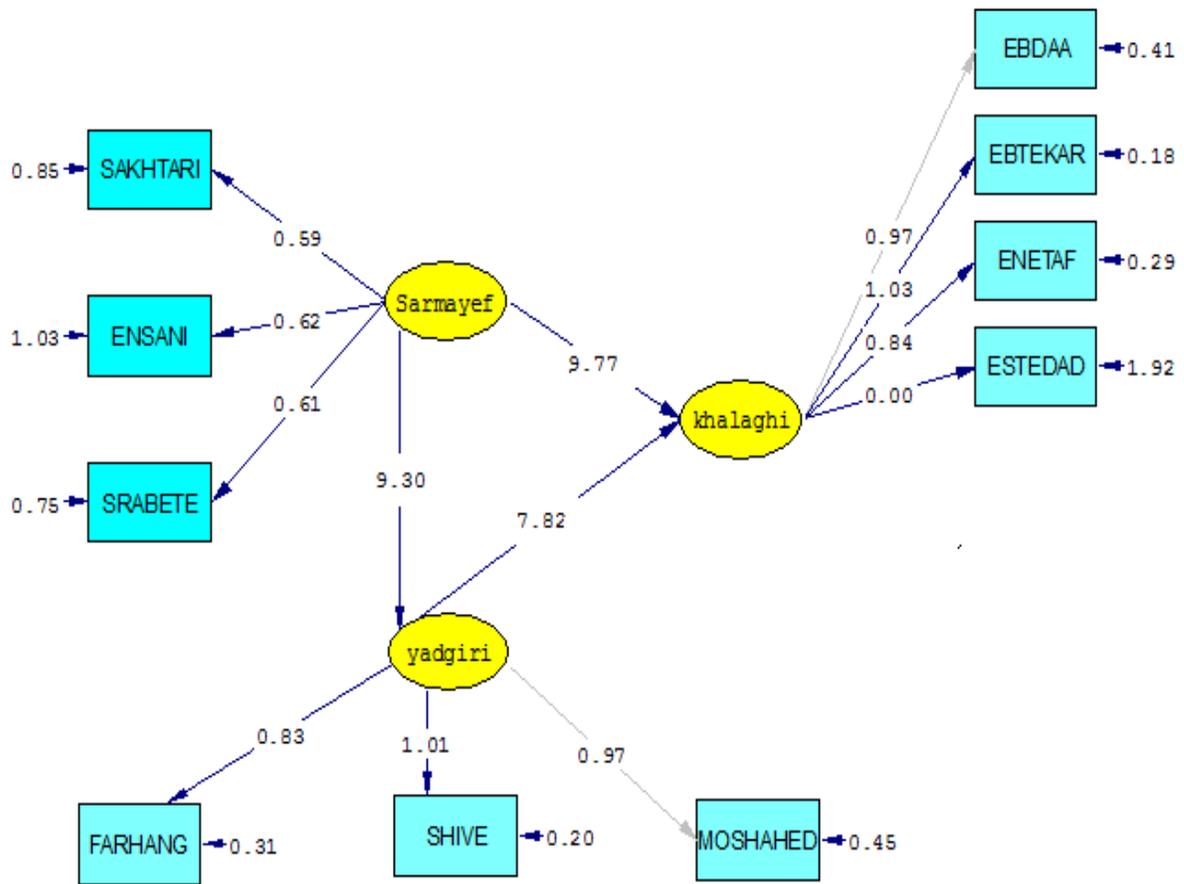
Table 2: Indexes showing model fitting

Obtained amount	Authorized amount	Index
53.75	Less than 3	K2 over degree of freedom
0.88	More than 0.9	GFI) Goodness of fitting(
0.0528	Less than 0.08	RMSEA(Root mean square error assessment)
0.83	More than 0.9	GFI) Adjusted goodness(
0.78	Less than 0.8	AGFI )Adjusted goodness of fitting index(
0.93	More than 0.9	NFI) Softened goodness(
0.94	More than 0.9	NFI)Softened goodness(



Chi-Square=1738.80, df=32, P-value=0.00000, RMSEA=0.528

Figure 1: Standard mode



Chi-Square=1738.80, df=32, P-value=0.00000, RMSEA=0.528

Figure 2: Significance mode

Table 3: Results of research hypotheses

Result of hypothesis testing	Significance figure	Standard coefficient	Hypotheses
Approved	9.30	0.89	Intellectual capital leads to organizational learning
Approved	9.77	0.47	Intellectual capital leads to creativity
Approved	7.82	1.52	Orgnaizaitonal learning leads to creativity

The first hypothesis: Intellectual capital has significant effect on organizational learning.

According to the obtained results from the route coefficient and t statistic, the intellectual capital variable has effect on organizational learning variable at 0.99 level of certainty (t statistic is located out of 2.58-2.58 span). It means that the more the intellectual capital is, the higher the learning of the staff will be.

The second hypothesis: Organizational learning has significant effect on creativity.

According to the obtained results from the route coefficient and t statistic, the organizational learning variable has effect on creativity variable at 0.99 level of certainty (t statistic is located out of 2.58-2.58 span). It means that the more the organizational learning is, the higher the creativity of the staff will be.

The third hypothesis: Intellectual capital has positive and significant effect on creativity of the staff.

According to the obtained results from the route coefficient and t statistic, the intellectual capital variable has effect on creativity variable at 0.99 level of certainty (t statistic is located out of 2.58-2.58 span). It means that the more the intellectual capital is, the higher the creativity of the staff will be.

## DISCUSSION AND CONCLUSION

The findings of this study indicate that the intellectual capital has a significant effect on organizational learning. This conclusion corresponds with the findings of other researchers such as H Sue Fung, 2004; Khelqati and Hayati, 2011; Azadeh Motalebi, 2009 and Amin Bidakhti, 2013. Also this result that the organizational learning has effect on creativity corresponds with the findings of Maanavipour et al, 2008 and Jamalzadeh, 2009. The result of intellectual capital is also effective on creativity and corresponds with the findings of Choopani et al, 2012 and Mohammadreza Behrang, 2009.

Management and development of intellectual capital is of high importance as a necessity within the organization. In fact development of intellectual capital is considered as a hidden treasure for any organization, particularly Department of Education and it is most appropriate nowadays to identify the intellectual capital, to measure it with different systems and to lead to increased organizational learning by developing it to end up with establishing creativity in the staff.

Nowadays one of the major goals of all the organizations is to reach organizational progress, thus this issue expresses the importance of organizational learning explicitly. It is then suggested that the directors create suitable conditions to enable the staff to learn, to assess what they have learned, to remove the shortcomings and in this way to establish the ground for the staff to show creativity and to found a creative organization. Considering the importance of the creativity issue and its effect on productivity of the organization, it is suggested to take steps toward other effective factors on creativity for future studies.

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