

## Study of the Role of Organizational Intelligence of School Managers on Improving the Entrepreneurial Performance of Them (Case Study: Second Course of High Schools in Tehran)

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**ABSTRACT:** This study was aimed to survey the role of organizational intelligence of school managers in Tehran high schools on improving their entrepreneurial performance in 2013-2014 academic year. Among statistical community using Cochran formula and random stratified sampling, samples of 267 managers were considered. The questionnaire was designed to collect data. The reliability of questionnaire using Cronbach's alpha and compound reliability was studied. As well as, the construct validity was used to test the validity of the questionnaire. The analysis of data obtained from the questionnaire by correlation test using SPSS software and structural equation modeling using PLS software. The results showed that the business intelligence of studied school managers and its aspects had a positive and significant impact on their entrepreneurial performance.

**Key words:** Business Intelligence, Entrepreneurship, Performance, Entrepreneurial Performance.

ORIGINAL ARTICLE  
Pii: S232247701500010-5  
Received 18 Jan. 2014  
Accepted 08 Mar. 2014

### INTRODUCTION

In today's world of the chaotic and acceleration there are successful and efficient people who enjoy a high IQ. Such people using their intelligence to overcome the problems of life. The same is true in term of education situation. Especially that in the present age, as time goes, with the development of science and technology and the emergence of new requirements and new challenges, educational institutions become more complex and difficult to manage them. This concept becomes more important when we accept that. In addition to a huge source and human morality, smart mechanical tools are involved in organizational performance trend. Therefore in today's education, organizational intelligence is the sum of human active intelligence and artificial intelligence. Complex problems of organizations and educational institutions at present competitive era have shown that there are no choices but to use features such as organizational intelligence to survive (Popovic et al., 2014).

On the other hand, developments in recent decades have demonstrated that organizations at today's dynamic environment of global competition despite the rapidly changing world, to survive and achieve competitive success increasingly committed to undertake entrepreneurial activities (Bloodgood et al., 2013). Dess et al. (1993), argue that organizations in order to be more competitive at service, should have an entrepreneurial approach. Entrepreneurship is a foundation for job creation, innovation, new value and effective competitiveness. Today entrepreneurship consider as a means of development. Because the existence of entrepreneur people creates the foundation of success (Samila and Sorenson, 2011). Entrepreneurship from the point of view of Shane &

Venkataraman (2000) is the process of identifying, evaluating and pursuing opportunities. On the other hand, due to the rapid rise of new competitors and a sense of mistrust of traditional management practices in companies the necessity of entrepreneurship in organizations is felt. According to (Naman and Slevin 1993), companies wishing to make successful CE, need to managers with strong entrepreneurial performance.

Managers of services industries, especially those active at the field of education through encouraging and persuading employees to entrepreneurship can makes them serve to increase innovation and through this these people are given freedom to without conflict with rules and red tape, implement their plans (Acs et al., 2008). It looks like that organizational Intelligence in creation of such potential and tendency to creative managers can be effective. Hence present study is an attempt to find the answer to this question that whether organizational intelligence of school managers impact on entrepreneurial performance improvement or not?

Several explanations have been offered for organizational intelligence. For instance, (Baars and Kemper 2008) define organizational intelligence as trial and scientific process that insists success or failure of the organization. According to them, organizational intelligence is based on experiences that can probably apply for effective performance of organization. According to this due to the special characteristics of organizational intelligence, however this factor has relations with organizational intelligence but organizational intelligence is a social and group consequence. This means that this intelligence is the result of performance of a group of people who act as a unit and on this perspective, it has

significant difference with personal intelligence. Moreover Albrecht (2003), believe intelligence is an ability to increase their knowledge and experience through errors. Base on this, His definition of intelligence is on the idea that organizations damage themselves more that environment or competitors. Such as the lack of administrative expertise, political competitions in all levels. Lack of leadership, irrelevant regulations and procedures all issues hindering the organization and business to use the power of the mind that the organization will pay for it. Albrecht knows his definition of organizational intelligence on the reason that when intelligence people gather in an organization inclined to the dimwitted and collective stupidity. In fact, there are two types of collective stupidity: learned type and designed type. Learned type of collective stupidity dominates when individuals are not allowed to think or belief in the existence of the organization is not as intellectual capital. Collective stupidity once dominated by the rules and systems, creative thinking, creative and independent individuals are difficult or impossible. According to this organizational intelligence as a potential and capacity of an organization in movement of organization to mental capability of organization and focus of this capability in direction of organizational mission.

For the concept of organizational intelligence, several dimensions presented that one of the most comprehensive categories presented by Albrecht (2002), that the seven dimensions are as below:

**Strategic vision:** briefly, capability of creation, reasoning and goal statement of an organization

**Common destiny:** when most staff involved in work, they know that what is the mission of organization, they feel to have an common purpose and each of them understand the successfulness of organization.

**Willingness to change:** some organizational cultures are leading with their initial executive teams. In such cultures performance, thought and reactions to the surrounded environment is as any kind of change, shows a kind of illness and consider as a chaos.

**Staff sprit:** when we think about their work life and their feeling of work and management and how they are optimistic of their job and promotion in organization we can understand their sprit. Alliances and agreements of staff: without roles to do, any group will encounter lots of problems and disagreements. Individuals and teams have to organize themselves for organizational mission, divide responsibilities and jobs and set some roles and regulations for conflicts between themselves and environment.

**Application of knowledge:** These days more than ever, decisions that lead to failure or success are

based on effective usage of information and data. Organizational activities are increasingly depended to the obtained knowledge and in time decisions.

**Performance pressure:** managers should not directly involve in performance. In an intelligence organization, each of managers should be in their executive position. Leaders can promote executive tools. Nevertheless, this is efficient if there is an effective group of expectations and executive obligation or common successfulness

In addition to organizational intelligence, in this study, the concept of entrepreneurial performance will study. Entrepreneurial performance presents a mental framework and perspective of entrepreneurship that is reflected in current organizational culture and processes. Most entrepreneurship scholars believe that organizations despite managers with strong entrepreneurial performance efficiently achieve their goals and improve their performance (Chen et al., 2006). Scholars believe entrepreneurial performance is a multi-dimensional structure and can evaluate in several aspects (Chang et al., 2007). Most scholars had used the concept of entrepreneurial orientation for identifying and defining entrepreneurial orientation. Based on this, main framework of entrepreneurial performance firstly presented by (Miller, 1983). He offered specific dimensions to describe entrepreneurial performance; miller introduced entrepreneurial individual/organization as people who are involve in markets with creative products, a little risk appetite and also pioneering in innovation (Morris et al., 2007). Innovation, reflecting the organization tendency to new ideas and creative process that the result may be products, services or new technological processes; risk appetite shows the tendency of individuals in allocating resources to the projects that there is the probability of success and failure. Moreover, risk taking can referred to quickly following opportunities, rapid supply sources and venture activities. Finally, pioneering shows tendency of people to discover new opportunities (Chang et al. 2007). Pioneer individuals, observe trends of market, identify future needs of customers and forecast changes in demand. Lumpkin & Dess (1996) added two factors that can have important role on entrepreneurial performance to the above items; aggressive approach and independence. Aggressive approach pointed to the tendency of individuals to hard challenges and directly encounter competitors in order to improve their situation. In lots of studies pioneering and aggressive approaches consider as variable. (Lumpkin and Dess 2001) in their definitions showed that these are two distinguish factors. Pioneering is a response to opportunities while aggression is a response to threats. Finally, last factor of entrepreneurship performance is independence that points to the free independent

activities of individuals or teams in creating and implementing new ideas. In general, features of entrepreneurial performance can be extended to the decision-making style and actions of organization members. These factors are innovation, risk appetite, pioneering, aggressive approach and independence that often work together to lead to improvement in entrepreneurial performance.

According to present study, relevant surveys have been done, that some of them are pointed in following:

In a study of Mehmet (2007), entitled the impact of leadership styles on organizational intelligence, the effect of leadership style (Transactional and transformational leadership) with job satisfaction of teachers in terms of organizational health was assessed. This study particularly investigates the subject that the diversity and change in organizational intelligence can be attributed to the leadership style and teacher job satisfaction. The most interesting findings was that transformational leadership have a profound effect on job satisfaction of teachers while transformational leadership of managers directly to the job satisfaction of teachers and indirectly affects the intelligence school. Lefter (2008), in a study entitled " Dimensions of Organizational Intelligence in Romanian companies, human capital profile" provides a general profile of staff positions of Romanian companies according to the seven dimensions of organizational intelligence. In his view, human resources and differences in organizational culture and the leadership between two classes can have considerable impact on the perception of the dimension of intelligence and performance of them. His results show that only 13 percent of large and medium-sized organizations are familiar with the concept of organizational intelligence and employees of smaller organizations do not have known this concept.

Hence, Lefter et al. (2008) offers managers get more familiar with this concept and its influencing factors in order to staff leads themselves to strength organizational intelligence. Albrecht (2003) conducted an investigations among Australian managers to evaluate organizational intelligence that theoretical framework used in this study were designed by the researcher. In this study, the views of a sample of Australian managers about their collective intelligence collected. In this study of 200 Managers and senior managers participated in two meetings in two different cities. Albrecht finally concluded that Australian managers with understanding their organizational intelligence could reach to a better understanding of their organization. Furthermore, given the interesting results obtained managers can have a look at the newer organizations. Riera et al.

(2007) in another study, investigates the effects of organizational intelligence on investment in information technology emphasized the importance of productivity and use of information systems. In this study, main factors determined organizational intelligence. In this study 161 Japanese small and medium-sized economic, commercial and industrial enterprises, completed questionnaires. The results showed a significant correlation as the higher organizational intelligence companies the greater investments in information technology and a higher level of productivity. Ganzert et al. (2012) investigate the relationship between organizational intelligence and expert systems success in organizations. In this research, organizational intelligence Albrecht is intended as a conceptual framework. Organizational intelligence and information was collected through Albrecht questionnaires. The study hypothesis was that there is a relationship between organizational intelligence and expert systems development. The results indicate a significant and positive relationship between the components of organizational intelligence and intelligent systems. Oswald (2005) in a research focuses on the performance of entrepreneurial employees, concluded that entrepreneurial activities can have a huge impact on organizational performance. He believes that, by EO managers can take advantage of social capital and improve organizational performance. Lumpkin & Dess (1996) by studying the relationship between entrepreneurial activity and performance in their research, founded that in the competitive environment, institutions that have an emphasis on individual entrepreneurial orientation, will reach to a better performance. According to them, EO by identifying external opportunities and develop new goods and services will lead to better organizational performance.

Therefore, as a proper basis is required for entrepreneurialism in organizations, the main issue in this study is whether intelligence and organizational dimensions (Based on Albrecht) has a significant impact on entrepreneurial performance? Thus, according to the statistical sample the main objective and sub-objectives associated with the conceptual model is presented below:

**The main objective:**

Organizational intelligence of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.

**Secondary objectives:**

1. Strategic vision of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.

2. Common destiny of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.
3. Willingness to change of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.
4. High spirits of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.

5. Alliances and agreements of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.
6. Knowledge Application of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.
7. Operating pressure of school managers of high school second course in Tehran contribute to improving their entrepreneurial performance.

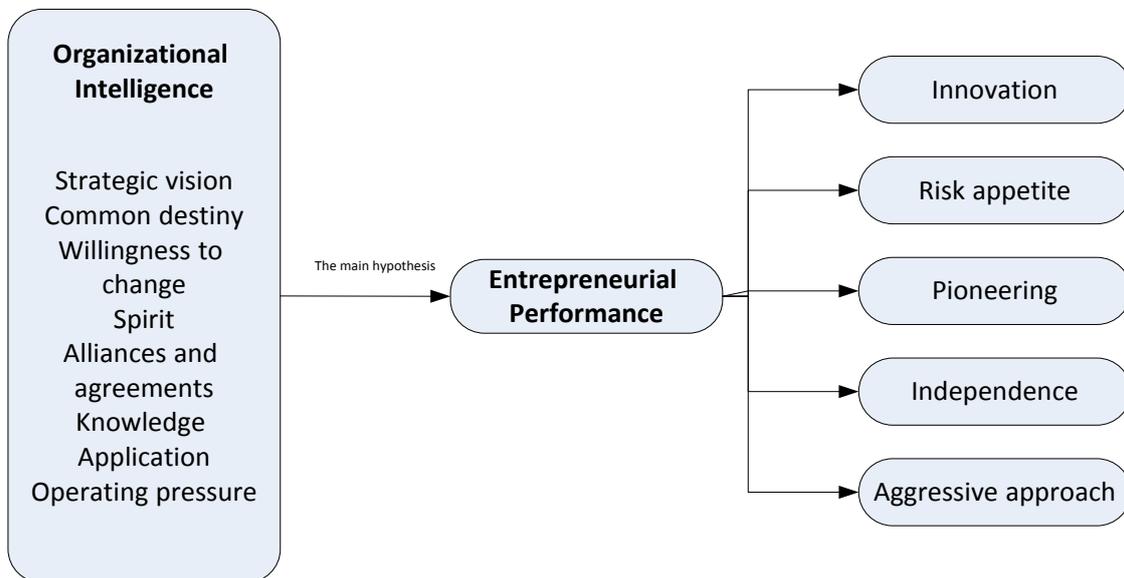


Figure 1. The conceptual model

**METHODOLOGY**

The method used in this study is based on purpose is application and in term of data gathering from descriptive-correlation. Also based on the type of data collected is quantitative. In this regard, the questionnaire distributed to receive viewpoint of managers of Tehran second course of high school and the results were recorded.

Data analysis is done by examining the overall conceptual model using structural equation modeling and PLS software. Structural equations act as a tool in the hands of researchers to study the relationships among several variables in a model. Variables in this method can be divided into two categories of reveal and hidden variables. In addition, models in this method are in fact composed of two parts. Measurement model which investigate that how hidden variables explain by reveal variables (questions) And structural model that shows how the hidden variables are related to each other (Byrne, 2013). In this study, business intelligence and entrepreneurial performance with their dimensions, hidden variables and questions related to each of them are reveal variables used to measure them.

The statistical community included school managers of second course of high school in Tehran

that due to the uncertainty in the calculation of the exact number Cochran formula for was used for unknown number of community to calculate sample size. Then, according to a stratified random sampling method, five areas of the West, East, South, North and downtown Tehran are considered as a category and then each category, a of second course high schools was chosen randomly and the questionnaire was distributed. Data in these study questionnaires that included the structural characteristics of the main research questions related to each dimension of the structures in the table below.

To measure the reliability of Cronbach's alpha and Composite Reliability (CR) was used that obtained by PLS software. Note that the values for the two criteria above 0.7 indicate good reliability (Rivard and Huff, 1998).

Results the following table shows the values for all the variables CR and alpha was higher than 0.7 and therefore reliable tool for measuring research confirmed. In addition, to assess convergent validity AVE (Average Variance Extracted) criteria was used which was obtained by PLS software. Results of this criterion for the variables are shown in the table below. The criteria for the acceptance of AVE is 0.5

(Hulland, 1999) and in accordance with the following table, the AVE values of the structures of more than 0.5 and this confirms the satisfactory convergent validity on the acceptable level.

In addition to convergent validity, the divergent validity, the difference between the structural parameters of the model was compared with other structural parameters. It works by comparing each

structure AVE square root was calculated by values of the correlation coefficient between the structures.

As it is clear from the above table, AVE square root of each structure is more than correlation coefficient of the structure with other structures that suggests divergent validity of this structure is acceptable.

**Table1.** Structure and dimension of study and number of questions

Structure	Dimensions	Number of questions
Organizational Intelligence (Albrecht, 2003)	Strategic vision	7
	Common destiny	7
	Willingness to change	7
	High spirits	7
	Alliances and agreements	7
	Knowledge Application	7
	Operating pressure	7
Entrepreneurial Performance (Hughes & Morgan, 2003)	Innovation	3
	Risk	3
	Pioneering	3
	Aggressive competition	3
	Independence	6

**Table2.** Reliability and convergent validity

variable	Top of Form Strategic vision Bottom of Form	Common destiny	Willingness to change	High spirits	Alliances and agreements	Knowledge Application	Operating pressure	Innovation Bottom of Form	Risk	Pioneering	Aggressive competition	Independence
CR	0.82	0.83	0.77	0.77	0.78	0.82	0.83	0.86	0.88	0.85	0.91	0.88
Alpha	0.74	0.75	0.76	0.76	0.75	0.74	0.75	0.79	0.81	0.79	0.83	0.81
AVE	0.57	0.55	0.61	0.61	0.59	0.63	0.64	0.71	0.68	0.64	0.73	0.71

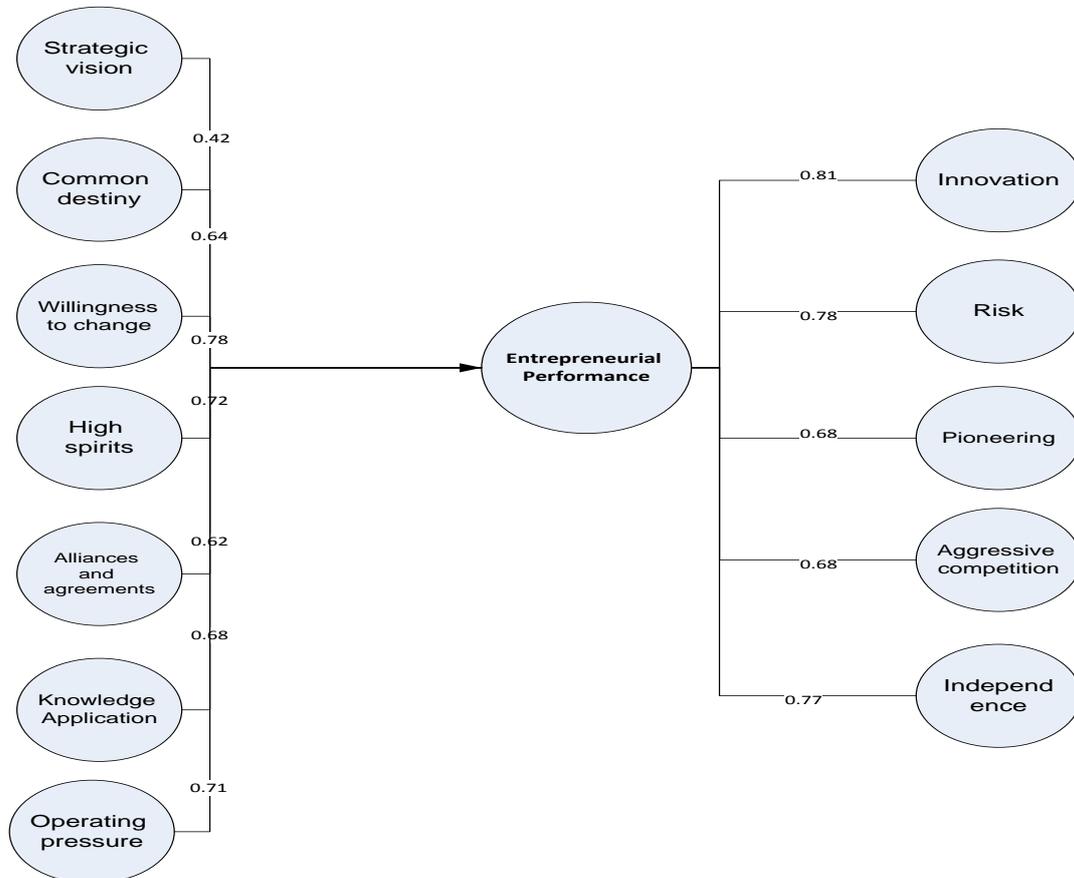
**Table3.** Divergent validity

Dimensions of research	1	2	3	4	5	6	7	8	9	10	11	12
<b>Top of Form</b> <u>Strategic vision Bottom of Form</u>	0.75											
<b>Common destiny</b>	0.31	0.74										
<b>Willingness to change</b>	0.43	0.34	0.78									
<b>High spirits</b>	0.12	0.12	0.24	0.81								<u>Bottom of</u>
<b>Alliances and agreements</b>	0.24	0.23	0.23	0.24	0.77							
<b>Knowledge Application</b>	0.51	0.44	0.22	0.54	0.18	0.79						
<b>Operating pressure</b>	0.31	0.23	0.43	0.41	0.66	0.33	0.8					
<b>Innovation Bottom of Form</b>	0.44	0.62	0.27	0.49	0.47	0.27	0.63	0.84				
<b>Risk</b>	0.23	0.41	0.51	0.42	0.36	0.41	0.54	0.54	0.82			
<b>Pioneering</b>	0.54	0.64	0.39	0.31	0.23	0.46	0.13	0.26	0.66	0.8		
<b>Aggressive competition</b>	0.22	0.32	0.44	0.15	0.44	0.47	0.12	0.54	0.54	0.62	0.85	
<b>Independence</b>	0.53	0.44	0.21	0.55	0.14	0.38	0.33	0.25	0.41	0.57	0.42	0.84

**RESULTS**

The causal relationship between organizational intelligence with its dimensions of entrepreneurial managers was measured in terms of the structural model. As shown in the figure below, impact on the performance of entrepreneurial management and organizational intelligence is meaningful and positive. In addition, strongest influence on the willingness to change is the entrepreneurial performance.

PLS software output in the figure above confirm main and secondary hypothesis of research because on the one hand, T values is greater than 1.96 which means significance is at the 95% and 99%. On the other hand, sign of standardized coefficients (above) are all positive. Thus, a positive and significant impact on the performance of entrepreneurial management and business intelligence is confirmed.



**Figure 2.** Evaluation of cause and effect relationship with the dimensions of organizational intelligence and entrepreneurial performance

**CONCLUSION**

Findings of the study of organizational intelligence of school administrators and their entrepreneurial performance showed a significant positive correlation between the two structures. Previous research had also stressed that according to the complexity and volatility educational environment, organizations have been forced to increase their ability to respond to the environmental changes. Today, organizations and educational institutions with conservative management cannot compete with, agile, flexible, innovative, and cost-oriented competitors. Managers should provide conditions all employees have benefited from the entrepreneurial spirit and individually or in groups can be easily implement their

entrepreneurial activities (Lampkyn and Dess, 1996; Hags and Morgan, 2007). Efficient and successful organizations are organizations that entrepreneurship as an inseparable part of their features and characteristics of knowledge management in order to strengthen the spirit of entrepreneurship. In this regard, organizational intelligence managers should play important factor for the survival of the organizations. In addition, provide the field of organizational development in order to outshine competitors. Our findings confirmed that without top executives with organizational intelligence cannot be expected in an organization that promotes entrepreneurial activities consequently, the role of organizational intelligence to improve the perform-

ance of entrepreneurial managers is important. And the development of the organization, improving services, success in the competition, increase employee motivation, job satisfaction, reduce administrative costs and reducing bureaucracy and motivates pragmatism requires more researches.

According to the results obtained, the hypotheses of this study were confirmed and it can be said that the organizational intelligence and the entrepreneurial performance of second course high school principals of Tehran there is a significant relationship. With primary and secondary hypotheses that examined the dimensions of organizational intelligence, we can conclude that to improve the entrepreneurial performance of school administrators should focus on the organization's organizational intelligence and to strengthen their ability to solve organizational problems. Today entrepreneur managers are required for each organization and organizations in this field should create the necessary substrates and the most important factors that have a significant role is Intelligence agency. Administrators can acquire general knowledge and information of all the factors that influence on organization, increase its business intelligence and thereby help to improve their entrepreneurial performance (De Angelis, 2013; Darroch and McNaughton 2002).

In fact, with increasing abilities in leadership, organizational intelligence would enhance and provide a better context for the development of entrepreneurship in the organization. This is perhaps because of the transfer of new ideas of managers to their close encounters with organizational issues. As (Brooks and Nafukho 2006) Argued that the sharing of knowledge and experiences between managers of major contributions to the development of innovation and entrepreneurial activity. In fact, they refer to the transfer of information in the condition of strengthen the ability of managers. In addition, they argue the effect of increasing the skills of managers on strengthening institutional innovations which is the cornerstone of improving entrepreneurship. According to the research hypothesis, it is offered to the studied school president to:

- To work together in order to solve the perceived value and to develop their entrepreneurial abilities and skills in their fields

- avoid to adherence to the views of the traditional methods and these methods and manner of things continuously be evaluated from several features in order to be compatible with dynamic and changing outside environment. In fact, organizational intelligence of managers that do not update themselves is always in a week level.

- To participate in courses entitled innovation and creativity

Finally, for future research variables can focus on moderating the relationship between organizational intelligence and entrepreneurial performance or act as a mediator and study a comprehensive model that contains all variables. Also with studying challenges of school president in term of entrepreneurship creation, identify and measure the effective factors on strengthening of Organizational Intelligence.

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