Investigation of Relationship between Organizational Intelligence and Agility of High School Administrators in Mazandaran Province, Iran

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ABSTRACT: Main goal of this study is the A Study on the relationship between the Intelligence organization and the agility of high school administrators Mazandaran province in the academic year 2011-2012. The method of the descriptive research is in correlation type. Population includes all high schools administrators Mazandaran to 437 people and 204 people were chosen by random classifying sampling method, as the research samples. The used tool in research includes two standard questionnaires of Intelligence organization and the agility of schools managers. Intelligence organization questionnaire including 49 questions according to likert scale and agility questionnaire including 30 questions according to likert scale were regulated. The collected data in study has been by using descriptive statistics measuring frequency, percent, drawing graphs and tables and inferential statistics multiple variables regression analysis test and pierson correlation coefficient test and analysis of variance test. The results of the study indicate that: There is positive and meaningful the relationship between the Intelligence organization and the agility of high school administrators Mazandaran. And Intelligence organization components, Alignment and congruence and Sprit can the best predictor for the agility of schools managers. There is positive and meaningful relationship between Strategic vision and the agility of schools managers. There is positive and meaningful relationship between Shared fate and the agility of schools managers. There is not positive and meaningful relationship between Appetite for change and the agility of schools managers. There is not positive and meaningful relationship between Alignment and congruence and the agility of schools managers. There is positive and meaningful relationship between Sprit and the agility of schools managers. There is positive and meaningful relationship between Knowledge deployment and the agility of schools managers. There is not positive and meaningful relationship between Performance pressure and the agility of schools managers.

Key words: Intelligence organization, agility, schools administrators.

INTRODUCTION

Change is an important issue in competitive sphere of organizations and institutes. From the start of 21th century, organizations have experienced fundamental changes around them. These changes, guide organizations through new challenges and disregarding these new challenges may threat their conservation. This has made many organizations to revise their strategic viewpoints and put an emphasis on adaptation to environment and response to customer needs and expectations through new methods like cooperation and virtual organization. Organizations have developed a new approach called agility, in order to respond to these challenges. Industrial conditions have changed a lot over past 15 to 20 years (Institute, 1991). In this period of time, technology, market conditions and customer expectations have changed a lot and organizations have been confronted with rapid and unpredictable changes. Many organizations take on new and different shapes in order to conserve their current position. One of the newest forms is agile organizations. Such organizations think beyond adaptation to changes and tend to use potential opportunities in a turbulent environment (Khosh Sima, 2003). In today's turbulent world, individuals who have high intelligence quota will succeed. Such individuals overcome life problems with their inbred intelligence. In organizational world, the same is true. In the present era, organizations are becoming more and more complex and their management is becoming more challenging due to progress in sciences and technologies and appearance of new needs and challenges. This concept becomes more important when we admit that smart mechanical tools play role in organizational
performance in addition to smart human resource. Therefore, in today's complex organizations, organizational intelligence is the resultant of human active intelligence and authentic intelligence. Undoubtedly, administrators will not have any alternative but to use these two smart items (Alberkht, 2003).

**Statement of the problem**

"Karl Alberkht" believes that presence of smart people, smart teams and smart organizations are necessary for an organization's success. He uses organizational intelligence in order to avoid group loafing. He presents a model for organizational intelligence (OI) which has 7 dimensions (=components): strategic vision, shared fate, appetite for change, alignment and congruence, spirit, knowledge deployment, performance. Like many other organizations, schools have special characteristics like: having a goal, having organizational structure, being regulated, and organizational relationships. New technologies development has also transformed schools performance and service and these changes are increasingly deepening (Barati Alavije, 2011). When intelligent individuals become employed in an organization, they become inclined towards social loafing and group reluctance. Most of the organizations get harmed by themselves rather than their competitors. Lack of executive skill, administrative struggles, political conflicts in all levels, disorder in organizing, meaningless regulations and procedures are all conspiracy for preventing a business from applying all its brain capital for whom it is paying money. Humans might be very smart and be capable of doing great works, but this is their cumulative brain force that makes great activities easier.

OI means a firm's capacity for applying all its brain force and concentration of that force on reaching its mission (Alberkht, 2003).

**Agility and its capabilities**

The word “agility” means fast, nimble movement and ability to move quickly and being able to think quickly and smartly in dictionary (Jafarnejad and Shahabi, 2007), which was introduced to respond to business environment changes and exploitation of those changes. Some of the definitions of agility are as follows:

- Ability to respond quickly to sudden and unpredictable changes (Goldmann et al, 1995)
- Obtaining profit from environment (Goldman et al, 1991)
- Ability to adapt and re-forming in a quick manner (Maskell, 2001, Hormozi, 2001)
- Ability to respond quickly to customer (Katayama and Bent, 1998)

Kidd has presented one of the most comprehensive definitions of organizational agility: an agile organization is a fast, compatible and conscious organization which has the ability of getting adapted to respond to unpredictable events and market opportunities and customer expectations (Kidd, 2000). Although there are many definitions for agility, none of them are opposing or contradicting and they indicate speed and change in business environment. Agility considers several fundamental capabilities in an organization:

- Responsiveness: which means ability to identify changes, rapid response to them and using them.
- Competency: which is a combination of abilities and provides activities productivity in order to reach goals.
- Flexibility: which means the ability to process different products and to reach goals with primary facilities.
- Speed: ability to carry out duties and operations in the available time (Sharifi and Jang, 1999, Trong Lin et al, 2005).

Therefore, if an organization is looking for agility, it must consider these capabilities and strengthen them so that productivity will increase.

The present research tries to investigate the relationship between OI and agility components proposed by Albrecht in public high schools administrators of Mazandaran province. Many studies have been conducted in this regard and some of them are reviewed in the next part.

Sanderson (1998) conducted a research and concluded that emerging intellectual power against material resources power is the driving motor of global changes. The new competitive advantage theory is based on mind's power than on material resources.

Kil Govar (2007) states that: knowledge is an asset and intelligence can be improved by exercise and it will weaken if there is no exercise and rehearsal. He advises to administrators to put effective knowledge management and OI improvement at the top of their agenda.

Franklin Becker (2001) conducted a research titled "organizational agility and knowledge base" and concluded that the present methods and models are not adequate and adaptation strategies are necessary for overcoming uncertainty in agile organizations in order to apply knowledge management tools.

Rick dove (1995) investigated relationship between knowledge management, ability to be responsive and institute agility in the form of literature review and believes that: "organizational agility is achieved when knowledge management and responsiveness are in equilibrium in organization."

Levi and Hazan (2007) see knowledge management (KM) as the applied aspect of organizational culture and dealt with the way of basing a cultural change by means of organizational agility. They also discussed KM empowerment elements from agile software engineering viewpoint and stated the way of increasing agility through extraction of data and KM.
Goldmann et al (1995) developed four dimensions of main strategy which emphasize on access to agile competition capabilities:

- Enrichment of customer, cooperation for increasing competitiveness, organizing for main changes, and leveraging individuals and information
- Yousef (1992) stated that agility is obtained only through integrating customers’ needs hierarchy in a framework of internal and external environment. This is obtained through a general approach to advanced organizational technologies along with internal abilities that process them and also through the application of information systems technology.
- Gounasakaren (1999) considers four basic aspects four agile production as strategy, technology, systems, and human force.

**Research hypotheses**

**Main hypothesis**
There is relationship between OI and administrators’ agility in public high schools of Mazandaran province, Iran.

**Subsidiary hypotheses**
- There is relationship between strategic vision and high school administrators’ agility.
- There is relationship between shared fate and high schools administrators’ agility.
- There is relationship between appetite for change and high schools administrators’ agility.
- There is relationship between sprit and high schools administrators’ agility.
- There is relationship between congruence and alignment and high schools administrators’ agility.
- There is relationship between knowledge deployment and high schools administrators’ agility.
- There is relationship between pressure performance and high schools administrators’ agility.

**RESEARCH METHODOLOGY**

The present research is of descriptive type and its statistical population includes all administrators of public high schools in Mazandaran Province over 91-92 academic years (437 people according to the latest provincial statistics). Cochran formula was used to determine sample size (204 people). Data gathering tolls were two standard questionnaires for measuring OI and agility and regression analysis and Variance analysis were used for investigating the main hypothesis and Pearson correlation coefficient test was used for investigating subsidiary hypotheses.

**Data and information analysis**
We investigate all research questions by considering correlation coefficient results.

Table 1. Matrix of correlation coefficients of administrators’ agility variables and predicting variables

<table>
<thead>
<tr>
<th>variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>administrators agility</td>
<td>.210**</td>
<td>.157*</td>
<td>.088</td>
<td>.285**</td>
<td>.053</td>
<td>.194**</td>
<td>.102</td>
<td>.214**</td>
</tr>
<tr>
<td>Predicting variables</td>
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<td>strategic vision</td>
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<td></td>
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<td>shared fate</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>appetite for change</td>
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<td></td>
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<td></td>
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<tr>
<td>sprit</td>
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<td></td>
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<td>alignment and</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>congruence</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge deployment</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.377**</td>
</tr>
<tr>
<td>performance pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organizational</td>
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<td></td>
</tr>
</tbody>
</table>

According to data in table 1, research hypotheses are tested.

Main hypotheses: there is relationship between OI and administrators’ agility.

According to data listed in table 1, the calculated correlation coefficient is significant in P<0.01 level (r=0.214, p=0.002). In other words, as OI increases, administrators’ agility will also increase.

First hypothesis: There is relationship between strategic vision and high school administrators’ agility.

According to data listed in table 1, the calculated correlation coefficient is significant in P<0.01 level (r=0.157, p=0.012). In other words, as shared vision increases, administrators’ agility will also increase.

Second hypothesis: There is relationship between shared fate and high schools administrators’ agility.
According to data listed in table 1, the calculated correlation coefficient is significant in $P<0.01$ level ($r=0.210$, $p=0.001$). In other words, as strategic vision increases, administrators' agility will also increase.

There is relationship between appetite for change and high schools administrators' agility.

According to data listed in table 1, the calculated correlation coefficient is not significant in $P<0.01$ level ($r=0.088$, $p=0.105$). In other words, there is no relationship between appetite for change and administrators' agility.

There is relationship between congruence and alignment and high schools administrators' agility.

According to data listed in table 1, the calculated correlation coefficient is significant in $P<0.01$ level ($r=0.285$, $p=0.000$). In other words, as spirit increases, administrators' agility will also increase.

There is relationship between congruence and alignment and high schools administrators' agility.

According to data listed in table 1, the calculated correlation coefficient is not significant in $P<0.01$ level ($r=0.053$, $p=0.105$). In other words, there is no relationship between alignment and congruence and administrators' agility.

There is relationship between knowledge deployment and high schools administrators' agility.

According to data listed in table 1, the calculated correlation coefficient is not significant in $P<0.01$ level ($r=0.194$, $p=0.003$). In other words, as knowledge deployment increases, administrators' agility will also increase.

There is relationship between pressure performance and high schools administrators' agility.

According to data listed in table 1, the calculated correlation coefficient is significant in $P<0.01$ level ($r=0.102$, $p=0.073$). In other words, there is no relationship between performance pressure and administrators' agility.

Regression model and simultaneous method and partial correlation were used to determine the best predictor for performance pressure from among predicting variables.

The results have been summarized in table 2.

Table 2. Multiple correlation coefficients and multiple correlation square for variables strategic vision, shared fate, appetite for change, sprit, alignment and congruence, knowledge deployment, performance pressure and performance pressure in prediction of administrators' agility

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Independent variables</th>
<th>Multiple correlation coefficient</th>
<th>Multiple correlation coefficient square</th>
<th>Adjusted Multiple correlation coefficient square</th>
<th>F(7,196)</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators' agility</td>
<td>strategic vision, shared fate, appetite for change, sprit, alignment and congruence, knowledge deployment, performance pressure and performance pressure</td>
<td>.355</td>
<td>.126</td>
<td>.095</td>
<td>4.035</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table above shows that there is significant relationship between strategic vision, shared fate, appetite for change, sprit, alignment and congruence, knowledge deployment, performance pressure and performance pressure and mangers' agility. $F(7,196)=4.035$ and $P=0.000$, therefore linear combination of linear values is significantly related to administrators' agility. Multiple correlation coefficient is 0.36 and shows that almost 13% of administrators' agility variance is explained by linear combination of OI values ($R^2=0.126$). Therefore it is concluded that the independent variables strategic vision, shared fate, appetite for change, sprit, alignment and congruence, knowledge deployment, performance pressure and performance pressure can predict dependent variable. Therefore, regression equation can be generalized to all statistical population. Results for determination of regression analysis coefficients and determination of prediction power for independent variables and formulation of regression equation have been presented in table 3.
Table 3. Coefficients of standard and non-standard regression analysis for prediction of administrators’ agility

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable statistical index</th>
<th>Non-standard beta coefficients</th>
<th>Standard error</th>
<th>Beta standard coefficient</th>
<th>T</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators’ agility</td>
<td>Constant number</td>
<td>109.145</td>
<td>16.334</td>
<td>-</td>
<td>5.545</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Strategic vision</td>
<td>.104</td>
<td>.484</td>
<td>.026</td>
<td>-.131</td>
<td>.896</td>
</tr>
<tr>
<td></td>
<td>Shared fate</td>
<td>.257</td>
<td>.641</td>
<td>.042</td>
<td>.810</td>
<td>.419</td>
</tr>
<tr>
<td></td>
<td>Appetite for change</td>
<td>-.455</td>
<td>.464</td>
<td>-.083</td>
<td>-.661</td>
<td>.510</td>
</tr>
<tr>
<td></td>
<td>spirit alignment and congruence</td>
<td>1.612</td>
<td>.451</td>
<td>.450</td>
<td>1.862</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Knowledge deployment</td>
<td>.593</td>
<td>.540</td>
<td>.097</td>
<td>1.499</td>
<td>.135</td>
</tr>
<tr>
<td></td>
<td>Performance pressure</td>
<td>.851</td>
<td>.585</td>
<td>-.149</td>
<td>-.335</td>
<td>.738</td>
</tr>
</tbody>
</table>

According to the results of table and significance of F in variance analysis table (6-4) and t, regression equation is related to administrators’ agility with all four predictors of life quality. According to slope coefficients (column B), regression equation will be as follows:

\[ Y = a + b_1x_1 + b_2x_2 + b_3x_3 + \ldots \]

Therefore, after substituting coefficients in the above formula, equation of predicting administrators’ agility out of values of life quality components will be as follows:

Prediction of administrators’ agility = 109.145 + 1.612 (strategic vision) – 1.209 (alignment and congruence)

According to slope value, as the values of the component strategic vision of OI variable increases and alignment and congruence is reduced, a greater value will be predicted for administrators’ agility.

Indices presented in table 4 show the relative ability of each predictor.

Table 4. Bi-variable and partial correlations of predictors with administrators’ agility

<table>
<thead>
<tr>
<th>variable</th>
<th>Bi-variable correlations</th>
<th>Partial correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic vision</td>
<td>.210**</td>
<td>.015</td>
</tr>
<tr>
<td>Shared fate</td>
<td>.157*</td>
<td>.029</td>
</tr>
<tr>
<td>Appetite for change</td>
<td>.088</td>
<td>-.070</td>
</tr>
<tr>
<td>spirit</td>
<td>.285**</td>
<td>.247**</td>
</tr>
<tr>
<td>alignment and congruence</td>
<td>.053</td>
<td>-.150*</td>
</tr>
<tr>
<td>Knowledge deployment</td>
<td>.194**</td>
<td>.078</td>
</tr>
<tr>
<td>Performance pressure</td>
<td>.102</td>
<td>.0103</td>
</tr>
</tbody>
</table>

P**<.01, p*<.05

Correlation of double variables: correlation of each predictor and administrators’ agility

Partial correlations: correlation between each predictor and administrators’ agility with controlling other variables.

As it can be observed, all bi-variable correlations between OI values and administrators’ agility are positive and four indices out of seven indices are significant (p<0.05). Two partial correlations between OI values and administrators’ agility are significant. According to correlation analysis, we can conclude that useful predictors from among OI components are spirit and alignment and congruence. Spirit predicts 6 percent and alignment and congruence predicts 2 percent (R^2) of administrators’ agility changes. This is while the share of all other variables is 5 percent (13%-8%).

CONCLUSION AND DISCUSSION

RESULTS OF THE MAIN HYPOTHESIS TEST

<<there is relationship between OI and high schools administrators' agility>>. Multiple regressions were used to investigate the main hypothesis in order to respond to research hypotheses.

This result matches the results of studies conducted by Nasabi (2008) and also Karl Alberkht (2003), who conducted many studies in the field of OI and Kil Govar (2007) and Rick Dove (2007).

Results of the present research also matches the results of studies conducted by Rahimi Bazkia Gourab (2011), Akbar Ghanavati, Mohammad Agha Hossein Ali Shirazi, Hojat Taheri Goudarzi (2009), Babolhavayeji, Doctor Seyyed Javad Ghazi Mir Saeed, Ali Allahian (2009), Sanderson (1998) and Franklin
Becker (2001). The mentioned studies showed that the components of organizational intelligence of employees are very important in efficiency.

RESULTS OF THE FIRST SUBSIDIARY HYPOTHESIS TEST

« there is relationship between strategic vision and high school administrator's agility. »
The calculated correlation coefficient between strategic vision and administrators' agility is significant in p<0.01 level (r=0.21, P=0.001). In other words, as strategic vision increases, administrators' agility will also increase. This significant relationship is also positive and direct. The results of this hypothesis test match the results of Nasabi (2008), Babolhavayeji, Ghazi Mir Saeed, Elahian (2009), Alberkht (2003), Kil govar (2007), Franklin Becker (2001).

RESULTS OF THE SECOND HYPOTHESIS TEST

« there is relationship between shared fate and high schools administrators' agility. »
According to the results of analysis, the calculated correlation coefficient was significant (r=0.157, P=0.012). This shows that there is a relationship between shared fate and administrator's agility. In other words, as shared fate increases, administrators' agility will also increase. Results of the second hypothesis test match the results of Babolhavayeji, Ghazi Mir Saeed, Elahian (2009), Nasabi (2008), Rahimi Baz Kia Gourab (2011), Alberkht (2003), Kil Govar (2007), Levi and Hazan (2007).

RESULTS OF THE THIRD HYPOTHESIS TEST

« there is relationship between appetite for change and high schools administrators' agility. »
According to the results of test, the calculated coefficient is not significant (r=0.088, P=0.105) and this shows that there is no relationship between appetite for change and administrators' agility.

RESULTS OF THE FOURTH HYPOTHESIS TEST

« there is relationship between sprit and high schools administrators' agility. »
According to the table data, the calculated correlation coefficient is significant in p<0.01 level (r=0.285, p=0.000). In other words, as sprit increases, administrators' agility will also increase. The results of this test match the results of studies conducted by Nasabi (2008), Babolhavayeji, Ghazi Mir Saeed, Elahian (2009), Rahimi Baz Kia Gourab (2011), Alberkht (2003), Keil Govar (2007), Rick Dove (2007), Franklin Becker (2001), Sanderson (1998) and Alberkht (2003).

RESULTS OF THE FIFTH SUBSIDIARY HYPOTHESIS TEST

« there is relationship between alignment and congruence and high schools administrators' agility. »
According to the data, the calculated correlation coefficient is not significant (r=0.053, P=0.105) and this shows that there is not a significant relationship between administrators' agility and alignment and congruence.

RESULTS OF THE SIXTH SUBSIDIARY HYPOTHESIS TEST

« there is relationship between deployment of knowledge and high schools administrators' agility. »
According to the results, the calculated correlation coefficient is significant in p<0.01 level (r=0.194, P=0.003). This shows that there is positive and significant relationship between deployment of knowledge and administrators' agility. In other words, as deployment of knowledge increases, administrators' agility will also increase and vice versa. The results of this hypothesis test match the results of studies conducted by Nasabi(2008), Babolhavayeji, Ghazi Mir Saeed, Elahian (2009), Alberkht (2003), Franklin Becker (2001).

RESULTS OF THE SEVENTH SUBSIDIARY HYPOTHESIS

« there is relationship between performance pressure and high schools administrators' agility. »
According to the results, the calculated correlation coefficient is not significant (r=0.102, P=0.073). This shows that there is not any relationship between performance pressure and administrators' agility.

REFERENCES

Kilgour AM. 2007. The creative process: The effects of domain specific knowledge on creative thinking techniques on creativity, Australasian Digital Theses for PhD Degree.