# THE ROLE OF PHILOSOPHICAL MINDSET IN EDUCATIONAL INNOVATION ADOPTION

**Ahmad Talebian[1], Shahram Salavati[2i]**
[1]Department of Education Management, Tonekabon Branch,
Islamic Azad University, Tonekabon, Iran
[2]Department of Business Administration, Tonekabon Branch,
Islamic Azad University, Tonekabon, Iran

**Abstract:**

The adoption of innovation is a cultural and managerial challenge for the modern educational systems. In the educational systems, managers/principals play significant roles to a successful innovation adoption. This paper evaluates the relation between philosophical mindset (comprehensiveness, introspection and flexibility) and motivation of educational innovation adoption. Through a survey, the data were gathered from 213 secondary school principals. Testing of hypotheses, using Spearman correlation coefficient, indicate that philosophical mindset and its dimensions positively associated with motivation adopting educational innovation. The results of Mann-Whitney U-test indicate significant different between male and female principals' in terms of philosophical mindset and its dimensions as well as their motivation in educational innovation adoption; the average scores obtained by female were significantly higher than male principals.

**Keywords:** educational innovation, motivation, admission of innovation, philosophical mindset

## Introduction

We live in an era with prominent features of uncertainty, complexity, globalization and increasing technological changes. Organizational success under these conditions necessitates changes in organizational activities and administration of the Third Millennium organizations (Salavati & Rahimaghaee, 2009). Nowadays, the major

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[1] Corresponding author: email salavatish@gmail.com

concern for most organizations includes development and implementation of strategies, which guarantee their success and survival in environmental changing and complex environment (Amabile, 1997). The organizations could not overcome small, flexible, innovative, opportunity-oriented and low-cost competitors only relying on high generation power and implementing several innovative projects. However, their growth and increment of their competitiveness power mainly depends on the talent and creativity of employees and managers. The continuous strengthening of innovative morale at individual and collective levels could also guarantee this important issue (Anderson, Varnhagen, Campbell, 1998).

To survive and adapt to the circumstancing changes and meet the needs of customers, organizations need to be dynamic and it requires creative and innovative managers and staffs. The success of any organization to achieve goals significantly depends on merit, efficiency and innovation of leaders and associated managers (Bahramiyan et al., 2014). In global economic system and increasing competition, creativity and innovation is in lieu of the key to survival and success of organizations (Burroughs, 1996). Increased level of innovation in organizations could lead to improved quality and quantity of services, reduced costs, avoids waste of resources, reduced bureaucracy and so increased productivity and efficiency, motivation and eventually job satisfaction among employees (Kirkgoz, 2008).

Growth and rapid changes, environmental uncertainty and some other issues caused innovation to be raised as the greatest social need for development in organizations and will result in organizations that make use of this issue in some ways. Creativity and innovation could be seen as an element of organization's dynamism affecting the improvement of organizational performance (Kirkgoz, 2008). Similarly, educational organizations along with other organizations affected by rapid and accelerated changes in technology, short life cycle of technology and so excessive compaction of competition need to develop innovation among employees and recognize the factors which have the capability to institutionalize this innovation (Bahramiyan et al., 2014).

Education play principle role in economic and social development of communities because the main asset of any country, which are the efficient human resources, will develop and expand in this system. To educate skilled and trained specialists, we must rely on education system. To achieve this noble purpose (training specialists), there is no means other than educational centers which are not accessible to community. Therefore, to secure the community experts, we should concentrate on educational elements (Lee, Choi, 1998). With the advent of new educational initiatives, there is no doubt that the world will witness wide changes in education and research. The curriculum innovation is now introduced as one of the best means of

communication, education and research on global level that has changed education, especially field of higher education.

The main purpose of these changes and innovations is to prepare and provide the opportunities for realization of philosophy of education for sustainable development. Real evidences and experiences indicated that few educational institutions could be successful in effective enforcement of these innovations. When failure to enforce innovation is deeply examined and compared with similar experiences, interesting points become evident for operators and planners. On the other hand, the development of multiple stakeholders and their interests in the process of decision-making has caused training centers to change into more complex organizations (Paulso, 2008).

The requisite to be consistent with educational innovations and changes related with these innovations is to create favorable environment for development of new ideas, creativity and innovation in organizations. Rogers (1962, p.13) defined an innovation as "*an idea perceived as new by the individual.*" He then extended the definition to an "*idea, object or practice that is perceived as new by an individual or other unit of adoption*" (Rogers and Shoemaker, 1971; Rogers, 2003). In other words, innovation is manifested creativity, realized creative idea or use of mental abilities to create a new thought or concept. Human as the main element could both bring about development and/or act as a major obstacle to development since the desire or the will to work or motivation is the key factor in creating the efforts and activities of an individual or individuals (Reardon, and Bullock, 2004).

To create brainstorm ideas and innovative insights and effectively respond to the vast changes occurring in the workplace, we could benefit from the most important intangible asset that are the staffs. On the other hand, the evident point in the management literature is that organization requires employees that are inclined to step beyond honorable formal requirements. Organizations should set their goal to foster humans in order to achieve success in competitive domestic and international areas so that they could confront issues and situations creatively, maintain proper and effective communication with each other and overcome resulted problems by enjoying fresh ideas (Reynolds, J. 2001).

Rational thinking is the basis of individual's work. According to rational thinking, the person should advance from identifying the problem to find proper solutions for problems; however, this is not feasible unless he/she have the properties of reasonable thinking. Logical thinking is the result of philosophical mindset. Managers with high degree of philosophical mindset, in view of the most organized small groups along with coordination committees and some of them, will concern all staffs while they will also be included as part of the group. Environmental, economic, political and social

changes caused the managers to confront newer issues regarding the treatment of employees in organizations. Due to highly dynamic nature of learning environments, several educational centers in the world due to changes in their environment have initiated to introduce and implement innovation in their programs. Javidi and Abotorabi (2010) believe that managers who had higher scores on the philosophical mindset questionnaire are more inclined to team leadership style. Ghaedi and Moradi (2015) indicate that philosophical mindset of school principals is higher than average level. Despite several studies in this field, they believe that knowledge in this area was inadequate and in some cases, results were contradictory and further researches are essential (Javidi & Abotorabi, 2010; Ghaeidi & Moradi, 2015).

Despite the importance of philosophical mindset and its role in educational organizations (Demerchili & Rasool-Nejad, 2008), few studies have addressed it in Iran. As far as the researcher knows, this is the first study that examines the relation between philosophical mindset and adoption of educational innovation. Therefore, several questions have been remained unanswered in this area that they have been addressed by the present study. For instance, How could strengthen the principals capabilities associated with philosophical mindset? How is the situation philosophical mindset and innovation adoption motivation among Iranian high school principals?

Therefore, the important issue in the process of adoption of educational innovation is the way of innovation adoption by key beneficiaries of education (Khosravi et al., 2013). According to above points, this paper specifically examines that how the philosophical mindset of principals, as the key element in educational system, is associated with their innovation adoption motivation.

## Theoretical Background and Literature Review

### Theoretical Background

Different views have been offered about the nature of philosophy. Philosophy has provided a framework for thinking, is able to develop thinking capabilities, and brings unity between mind and action. In other words, philosophy is a kind of mental activity that helps human to have deeper reflection about the results of his daily practices and act wisely (Javidi & Abootorabi, 2010). An action devoid of though-based guidance will be no effective. In education system, the ways the teachers deal with students depend on the way of thinking and perception of human nature. Philosophical approach helps the teacher to reflect on the concept of reality, human nature and society (Gutek, 2015).

Therefore, strategies, methods and objectives may be associated with theory and concepts of a philosophy or a combination of both. In this case, a teacher who acts based on the philosophical foundations deals with the philosophy of education. Accordingly,

the actions of teacher, student, teaching materials, equipment and training facilities, management and organization all have specific systematic process based on philosophical principles and theories (Shariatmadari, 2011).

Perception of social practices is not possible without having knowledge about human nature. Deep understanding of human nature is not achievable with no knowledge of rules of mind and adequate knowledge of the rules of mind is not achievable with no knowledge of environmental rules. On the other hand, for environmental laws reflected in human to become appropriate, the general rules of life should be instructed. Changing mentalities will establish new human and society. The culture of combining high mentalities as well as the mentality is the basis of social practice in small groups or social macro-system (Ebrahimi & Gol Mohamadi, 2010).

Mind is a potential capacity that receives essential information from environment with the help of five senses and intervenes with a variety of mental processes such as comparison, analysis, reasoning, inductive, etc., changes their quantity and quality and eventually classifies and records them. More importantly, it provides new information during the process of thought production with the forces at its disposal. Therefore, the role of the mind is not merely displacement, movement and change of sensory data but as a generator based on data interpretation it will innovate, create and discover new information (Mirzaei, 2014).

During the training, learning and cognition process, assumptions or mentalities of both the learner and teacher are very important and sensitive because any kind of knowing received from the outside world for the first time, which is formed in our mind, will create a background and model in mind based on which other concepts will be evaluated. Adoption of any kind of information and knowledge is subject to adjustment with these principles, beliefs and primary backgrounds. These prototypes establish the infrastructures and foundations of our minds and the way of our thinking and behavior is based on it (Mashayekhi & Ali Ahmadi, 2014).

Thinkers are classified based on the characteristics and principles of their thoughts. Based on the nature of philosophy, the set of features for effective thinkers who have tended or directed to issues in their approaches are defined as philosophical mentality (Smith, 1956). Philosophical mind is correct scientific thinking. Perhaps the reason for inscription of philosophical mind instead of scientific though is that scientific method in view of some people is actually the same way that natural scientists apply in laboratory research (Gholamhosseni, 2010). On the other hand, philosophical mindset is a feature that administrators can benefit from when faced with countless issues of leadership. In other words, managers who have a philosophical mindset have more opportunities to observe issues based on long-term goals, creative generalization, underlying rationale and a range of reasonable choices. This person always tries to

universalize his ideas, beholds the issues in relation to the broad context and long-term goals, puts the evident subjects into questions and enhances his/her opportunities to move beyond prejudice, ignorance, personal bias and stereotypes. This person possesses flexibility with innovation, and creativity and generosity. So, someone with high level of philosophic mentality is expected to have strong relationship and strong task-orientation who examines the issues from alternative and multiple aspects (Javidi & Abotorabi, 2010).

Sarkhanloo (2014) defines philosophical mindset as the ability of the mind, way of thinking, discipline, mental discipline and willingness of person for valuation and correct judgment and habit of creative thinking to understand the facts in confrontation with various problems. According to his definition, philosophical mindset has features such as comprehensiveness, meditation and flexibility. Comprehensiveness is known with four indicators: 1) Observation of specific matters with regard to their relevance to a wide field 2) Linking the present issues to the distant issues 3) Use of generation power 4) Consideration for theoretical aspects (Noori et al., 2013).

Introspection component is introduced based on four indicators: 1) Putting the certain or granted issues in to question 2) Discovery and development of foundations 3) Application of sensitivity to matters which bear implicit or connective meanings 4) Founding expectations based on inference hypothesis current (Smith, 1956). Flexibility is also identified with four indicators: 1) Releasing yourself from mental rigor 2) Measuring the value of thoughts and ideas regardless of their source 3) Consideration of issues discussed from various aspects 4) Acceptance of theories and temporary and conditional judgments and interest in making decisions in ambiguous situations (Shariatmadari, 2011).

In conclusion, we could say that philosophy plays important role for clarifying the different levels of complexity and chaos at entire levels of human thinking. Profound thought and philosophic mind will strengthen systematic and comprehensive approach and prevent hasty decision-making. Philosophical mindset leads the managers when dealing with countless issues. Philosophical mindset has the features of comprehensiveness, meditation and flexibility. People with these characteristics have a different understanding of conflict and contradictories. They are able to examine the issues from different aspects and conquer them.

**Literature Review**

Several studies have been conducted on variables examined in this paper, adoption of innovation and philosophical mindset, with other variables that are described as follows:

The study by Khosravi et al. (2013) entitled "*Analysis of Curriculum Innovation Adoption in Higher Education System, A Case Study: Revised Regulations of Curriculum in Universities in Iran*" both presented a model suitable for curriculum innovation and examined innovation pathology in different models of adoption of innovation in curriculum. The model of innovation adoption in curriculum was implemented amongst 179 faculty members of different universities in Tehran who participated in enforcement of revised regulations of curriculum. Data analysis showed that revised regulations of curriculum in universities in Iran were not practically accepted. The results also showed that curriculum innovations in higher education must consider several factors for implementation.

Noori et al. (2013) conducted a study entitled "*Effect of Philosophical Mindset on Solving Math Problems Amongst Third Year Students of Junior School in Hamedan Divided by Gender*" which applied stratified sampling with proportional allocation for 367 students. The findings showed that besides to the approval of the original philosophical mindset on students' ability for solving math problems, the size of this effect is also fierce. In addition to stronger philosophical mindset of students, the ability to solve mathematical problems also significantly increases. However, the main effect of gender and counter-effect of philosophical mindset and gender on students' ability for solving math problems was not significant. Moreover, the effect of introspection on students' ability for solving math problems was significantly higher than comprehensiveness and flexibility.

Mirzamohammai et al. (2013) studied the relationship between philosophical mindset and organizational creativity of State Management Training Center staffs and found that there is positive and significant relation between philosophical mindset and its dimensions (comprehensiveness, introspection and flexibility) and employee's creativity of State Management Training Center. Stepwise regression analysis showed that from dimensions of philosophical mindset, the variables of comprehensiveness and flexibility are the best predictors of employee's creativity of State Management Training Center. Therefore, due to higher level of philosophical mindset and its dimensions (comprehensiveness, introspection and flexibility) amongst State Management Training Center staffs, they will show more creativity. Data analysis leads us to the conclusion that from the aspects of philosophical mindset, comprehensiveness has more relation with creativity while flexibility and introspection are respectively in the second and third ranks.

Imani et al. (2012) conducted a study entitled "*Relationship between Philosophical Mindset of School Principals and Teachers' Performance*" on a sample of 395 teachers and 140 principals by stratified random sampling from among 4508 teachers and principals of Education in East Tehran. They found that there was a significant relationship

between philosophical mindset of principals and teachers' performance. In other words, teachers' performance could be predicted based on philosophical mindset of principals. Sharvaid (2008) examined the relationship between organizational citizenship behavior and adoption of innovation amongst 174 faculty members of universities in Denmark and found that there was significant relation between dimensions of citizenship behavior and adoption of innovation, however there was no significant relation between citizenship behavior and adoption of innovation based on demographic variables.

Nehemiah shiny (2002) as cited by Imani et al. (2012) conducted a study entitled *"Relationship between Performance in Virtual Courses, Thinking Styles, Gender, Experience, Information and Communication Technology"* and found that people with liberal thinking style have significantly better performance compared to others with different styles. In addition, extraversion people compared to introversion people and particularistic people compared to generalist people exhibited better performance.

The study by Reynolds (2001) entitled *"Financial Services Approach for Managers with Philosophical Mindset"* investigated the philosophical mindset of staffs and marketing managers as well as their performance and efficacy in the development process of new financial services. The population consisted of marketers and managers in the city of Krakow. The results showed that philosophical mindset could have positive effect on the attitude toward efficacy in marketing systems and quality of their interaction in the face of changes. Marketers with higher level of introspection have better performance against customers' reactions. Besides, philosophical mindset has significant relation with self-confidence in convincing customers of financial services. Bahramian et al. (2014) examined the dimensions of competence of 114 patients (58 females and 56 males) of elementary school principals and the adoption of innovation and found that principals' competency is positively associated with adoption of their educational innovation.

Table 1 presents and compares related literatures and their results.

**Table 1:** Related literatures

| Researcher(s) | Conclusion | Subject |
|---|---|---|
| Mahboobi et al. (2015) | There is significant relation between philosophical mindset and critical thinking and irrational beliefs | Investigate the relationship between philosophical mindset and critical thinking and irrational beliefs among school principals |
| Bahramian et al. (2014) | Principals' competency is positively associated with the adoption of educational innovation | Relationship between competencies of school principals and their adoption of innovation in their education activities |
| Noori et al. (2013) | Approval of the main effect of philosophical mindset on students' ability for solving math problems | Effect of philosophical mindset on ability for solving math problems amongst third year students of junior school in Hamedan divided by gender |
| Moosavi et al. (2011) | There is positive and significant relation between dimensions of organizational atmosphere and adoption of innovation in curriculum | Relationship between dimensions of organizational atmosphere and adoption of innovation in curriculum |
| Sokhanvar (2010) | There is significant relation between every dimensions of philosophical mindset and attitudes to active teaching methods | Philosophical mindset and attitudes to active teaching methods among math teachers |
| Javidi and Abootorabi (2010) | There is significant relation between principals' leadership styles in terms of their philosophical mindset | Philosophical mindset and leadership style |
| Sharvaid (2008) | There is significant relation between dimensions of citizens' behavior and level of innovation adoption | Relation between citizens' behavior and level of innovation adoption |
| Nehemiah shiny (2002) | People with liberal thinking style have significantly better performance compared to others with different styles | Relationship between performance of virtual courses and communication and information |
| Marygline (1999) | People with flexible thinking style have high ability of flexibility | Principals' thinking style |
| Lee and Choi (1998) | There is significant relation empowerment factors of information technology and adoption of innovation | Relation between empowerment factors of information technology and adoption of innovation |
| Burroughs (1996) | Philosophy helps students describe and accept their environment more comfortable | Philosophy for Children |
| Velkot (1977) | Educational researchers have no consideration for the way the teachers deal with innovation | How to achieve educational innovation |
| Smith (1956) | There is direct relation between principals' philosophical mindset and favorable human relationships and employees' morale | Investigate the effect of philosophical mindset on favorable human relationships and creativity of principals |

### Hypotheses

Based on the raised questions and issues, theoretical grounds and reviewed literature, the present paper examined and tested the following hypotheses:

### The main hypothesis:

There is a significant relation between principal's philosophical mindset and their motivation toward educational innovation adoption. According to philosophical mindset sub-dimensions, the following presents **the research Sub-hypotheses:**

**H1**: There is a significant relation between principal's philosophical mindset (comprehensiveness dimension) and his/her motivation toward educational innovation adoption.

**H2**: There is a significant relation between principal's philosophical mindset (introspection dimension) and his/her motivation toward educational innovation adoption.

**H3**: There is a significant relation between principal's philosophical mindset (flexibility dimension) and his/her motivation toward educational innovation adoption.

### Secondary hypotheses:

**H4**: There are significant differences between principals' philosophical mindset and its dimensions regarding their sex.

**H5**: There are significant differences between principals' motivation toward educational innovation adoption regarding their sex.

### Methodology

The present study is a descriptive and correlation research in terms of nature and method. The researcher describes the nature of research question, which is the investigation of the relation between philosophical mindset as predictor variable and motivation for innovation as criteria. Since the researcher examines the quality of the relation between philosophical mindset and motivation for innovation, this study is a descriptive and correlation research in terms of nature and method. It has also the properties of field-study and library research in terms of spatial features. This study involves a survey of senior school principals in Gilan Province. To study the review of literature, library method was conducted. In field-study, administrative and operational stages, standard survey were distributed in order to collect required data.

The population in this study included 527 secondary school principals in Gilan province from which 213 principals (103 female and 110 male) were selected as sample. SPSS-19 statistical software was used in this study to test the hypotheses. Spearman test

was used for correlation analysis of predictive and criterion variables. Besides, the comparison between philosophical mindset of male and female principals, due to non-normal distribution of data, was conducted using Mann-Whitney U-test.

## Findings

In total, the questionnaires were distributed among 213 respondents while 110 persons (51.6%) of them were male. Majority of respondents had experience more than 25 years (53.2%) and were in age range of 41-50 years (61.5%).

## Description of Study Variables

**Table 2:** Philosophical mindset, its dimensions and innovation adoption motivation

| Dimensions | Number | Minimum Score | Maximum Score | Maximum Attainable Score | Average | Standard Deviation |
|---|---|---|---|---|---|---|
| Comprehensiveness | 213 | 32 | 77 | 80 | 56.43 | 9.39 |
| Introspection | 213 | 36 | 68 | 80 | 52.30 | 7.89 |
| Flexibility | 213 | 33 | 74 | 80 | 54.35 | 11.87 |
| Philosophical mindset | 213 | 116 | 218 | 240 | 163 | 27.57 |
| Innovation Adoption Motivation | 213 | 116 | 218 | 240 | 163 | 27.57 |

According to Table 1, it is observed that respondents in comprehensiveness dimension has the highest average which is equal to 56.43 while it has the average 52.30 in introspection dimension. It is also seen that no respondent could obtain score above 70 in obtaining the highest score in introspection dimension. In addition, with a mean of 163 out of 240 that fall in the third quarter shows that respondents have relatively philosophical mindset. Similarly, with a mean of 55.79 out of 90 that almost fall in the third quarter shows that respondents are partially motivated in adopting educational innovation.

**Table 3:** Philosophical mindset, its dimensions and innovation adoption motivation by sex

| Dimensions | Male Principals | | Female Principals | |
|---|---|---|---|---|
| | Mean | Standard Deviation | Mean | Standard Deviation |
| Comprehensiveness | 55.14 | 8.31 | 57.66 | 10.26 |
| Introspection | 50.60 | 7.27 | 53.92 | 8.19 |
| Flexibility | 52.16 | 11.44 | 56.43 | 12.06 |
| Philosophical Mindset | 157.90 | 25.67 | 168.02 | 28.74 |
| Innovation Adoption Motivation | 54.26 | 6.75 | 57.28 | 7.96 |

By comparing the dimensions in male and female principals, it is observed that in all dimensions females exhibit higher scores than males however; both groups have the average in the range of 150 to 200. The results interpretations are shown above. The diagram of this comparison proves the superiority of women to men.

**Testing Research Hypothesis**

The analyzed hypothesis of research is as follows:

**The main hypothesis:**

*There is a significant relation between principal's philosophical mindset and their motivation toward educational innovation adoption.*

**Table 4:** Correlation between philosophical mindset and motivation toward innovation adoption

| Predictive variable | Criterion variable | R | Coefficient of Determination | P-value |
|---|---|---|---|---|
| Philosophical mindset | motivation toward educational innovation adoption | 0.810 | 0.656 | 0.001 |

Based on Table 4, the calculated correlation coefficient was significant at 0.01 level (p=0.001, r=0.810) which shows that there is strong positive relation between philosophical mindset and motivation for adoption of education innovation amongst senior schools principals in Guilan province. In other words, increased level of philosophical mindset amongst senior schools principals leads to higher level of motivation for adoption of education innovation.

**Sub-hypotheses**:

**H1**: *There is a significant relation between principal's philosophical mindset (comprehensiveness dimension) and his/her motivation toward educational innovation adoption.*

**Table 5**: Correlation between comprehensiveness and motivation
toward innovation adoption

| Predictive variable | Criterion variable | R (Correlation) | Coefficient of Determination | P-value |
|---|---|---|---|---|
| Comprehensiveness | innovation adoption motivation | 0.755 | 0.570 | 0.001 |

Based on Table 5, calculated correlation coefficient was significant at 0.01 level (p=0.001, r = 0.755) which shows that there is strong positive relation between comprehensiveness and motivation for adoption of education innovation amongst senior schools principals in Guilan province. In other words, increased level of comprehensiveness amongst senior schools principals leads to higher level of motivation for adoption of education innovation.

**H2**: *There is a significant relation between principal's philosophical mindset (introspection dimension) and his/her motivation toward educational innovation adoption.*

**Table 6**: Correlation between introspection and motivation
toward innovation adoption

| Predictive variable | Criterion variable | R (Correlation) | Coefficient of Determination | P-value |
|---|---|---|---|---|
| Introspection | innovation adoption motivation | 0.753 | 0.567 | 0.001 |

Based Table 6, calculated correlation coefficient was significant at 0.01 level (p=0.001, r=0.753) which shows that there is strong positive relation between introspection and motivation for adoption of education innovation amongst senior schools principals in Guilan province. In other words, increased level of introspection amongst senior schools principals leads to higher level of motivation for adoption of education innovation.

**H3**: *There is a significant relation between principal's philosophical mindset (flexibility dimension) and his/her motivation toward educational innovation adoption.*

**Table 7**: Correlation between flexibility and motivation
toward innovation adoption

| Predictive variable | Criterion variable | R (Correlation) | Coefficient of Determination | P-value |
|---|---|---|---|---|
| Flexibility | Innovation adoption motivation | 0.813 | 0.660 | 0.001 |

Based on Table 7, calculated correlation coefficient was significant at 0.01 level (p=0.001, r = 0.813) which shows that there is strong positive relation between flexibility and motivation for adoption of education innovation amongst senior schools principals in Guilan province. In other words, increased level of flexibility amongst senior schools principals leads to higher level of motivation for adoption of education innovation.

**Related findings**

To investigate significant difference between mean philosophical mindset and its dimensions (H4) and motivation toward educational innovation adoption (H5) between male and female schools principals, Mann-Whitney U-test was used. As shown in Table 8, there are significant differences between male and female in terms of principals' philosophical mindset, its dimensions and their motivation toward educational innovation adoption. In addition, Mann-Whitney U-test show that female principals' average scores of philosophical mindset, its dimensions and their motivation toward educational innovation adoption were significantly higher than male principals were.

**Table 8**: Mann-Whitney U-test to determine significant difference
between two male and female groups

| Dimensions | Number | Mean Rate of Male principals | Mean Rate of Female principals | Significance (Two ranges) | Result |
|---|---|---|---|---|---|
| Comprehensiveness | 213 | 97.29 | 117.37 | 0.017 | Approved |
| Introspection | 213 | 92.40 | 122.59 | 0.001 | Approved |
| Flexibility | 213 | 96.18 | 118.56 | 0.008 | Approved |
| Philosophical Mindset | 213 | 96.35 | 118.37 | 0.009 | Approved |
| Innovation adoption motivation | 213 | 94.41 | 120.45 | 0.002 | Approved |

**Discussion and Conclusion**

According to research findings, all tested hypotheses were approved at 95% confidence level. With regard to the main hypothesis we could say that there is a strong positive relation between philosophical mindset and motivation toward educational innovation adoption (p=0.001, r=0.810). To explain these findings, we could say that philosophical mindset is a strong factor affecting motivation toward educational innovation adoption by principals. Incidentally, Bahramian et al. (2014) indicated a strong association between principals' competency and educational innovation adoption. In addition, the level of principals' philosophical mindset can predicate up to 66% of their motivation

toward educational innovation adoption. Besides, the establishment and strengthening of philosophical mindset dimensions could strengthen innovation motivation and in turn achieving the educational goals. The results express that all dimensions of philosophical mindset has strong association with principals' motivation toward educational innovation adoption (r>0.7). As the dimension of flexibility (r=0.813, p=0.001) shows the most strong association.

Based on the results of this research and similar studies (e.g. Sokhanvar, 2010; Mahboobi et al., 2015; Ghaeidi and Moradi, 2005), it could be climbed that dimension of comprehensiveness due to theoretical aspects by principal and universalize ideas and his/her holistic view to unify the affairs (Smith, 1956) could help maximizing motivation toward innovation up to 57%. Similarly, the results indicate a direct positive association between introspection (another philosophical mindset dimension) and motivation toward innovation adoption (r= 0.753). To describe the relation between introspection dimension and motivation toward innovation adoption, we could say that introspection higher than 56% is able to release from coercion of evident affairs, present the basic thoughts and ideas as keys for solving problems, and help to increase the motivation for adoption of innovation in school principals.

Likewise, the relationship between flexibility and motivation toward innovation adoption; it can be said that innovation, transformation, creativity, and attention to the issues discussed from different aspects by principals could help the motivation for adoption of innovation up to 66%.

Results of this study confirms the research findings of studies by Smith (1956), Pira (2009), Babaei (2012), Mirza-Mohammadi et al (2013), and and is consistent with studies by Neimati et al. (2012) which believe that principals with higher philosophical mindset have better chance of seeing things based on organizational goals. In this regard, Javidi and Abootorabi (2010) concluded that there is significant difference between leadership styles of principals based on their philosophical mindset. It means that principals who had higher scores on the philosophical mindset questionnaire are more inclined to team leadership styles. The mean scores of principals in their study are higher than present research.

According to the study by Noori et al. (2013) on the philosophical mindset impact on students' ability to solve mathematical problems and due to stronger philosophical mindset of students, the ability to solve mathematical problems also significantly increases. In this respect and according to coefficient determination of 0.656 in present study, philosophical mindset about 66% could predict motivation for adoption of innovation. In this respect, the results of research by Farhadi and Salmanzadeh (1393) also confirmed the point that higher level of philosophical mindset of principals leads to higher level of performance. Similar to the results by Montazer-

alzohor and Jafari (2014) who believe that higher scores of philosophical mindset will increase the scores of attitude to change. Since in none of the aforesaid studies, relation between philosophical mindset and motivation of adoption of innovation was not examined in school principals, the necessity of this research is verified to large extent.

Finally, the research emphasized that the higher philosophical mindset by managers results in higher rate of innovation adoption in educational systems. In addition, as managers play a vital role in motivating the employees to deliver their duties productively (Rahimaghaee et al., 2015); managers who accept adopting an innovation, more likely their employee tend to adopt the innovation and implement it productively (Salavati et al., 2013).

**Recommendations for Further Studies**

1. Even if data is collected through complete enumeration in statistical analysis, observed persons should be regarded as samples of population. Since data are definitely not collected from all members of society, errors may occur in results because accuracy of data could be affected by various factors. Since the results of this research are carried out among a limited population, caution should be exercised in generalizing it to all principals. Therefore, this study should be implemented in other provinces and cities.

2. Although in management authority, the overall structural form of tasks and management skills have much in common, however training management is a small part in humanities and management. In some sectors, despite the inseparability of interface factors and similar challenges, they have different natures. Therefore, it is recommended that this research should be conducted in other organizations in order to examine the relation between philosophical mindset and motivation for adoption of innovation amongst other managers.

3. In every organization, there are incentives for important and necessary works and this issue should be considered for education system. Since the work is the necessity of development and majority of people spend most of their time in the workplace, motivation is an important and essential factor. Each job is associated with burnout but in some jobs, according to the type of work, diversity of tasks and responsibilities, physical and mental exhaustion is higher. Difference in the performance or indifference to affective matters and lack of timely decision-making will disrupt the process of the educational outcomes and affect the ultimate performance of organization. Thus, it is appropriate to examine the relation between job satisfaction and job burnout.

## About the Authors

Shahram Salavati is an assistant professor in the department of business administration. He teaches different courses related to business and marketing to both post-graduate and undergraduate students. Dr. S. Salavati earned his PhD. from The Universiti Teknologi Malaysia (UTM), and his research and consultation interests include effective Internet use in organizations, and innovation and IT adoption. He believes that learning goes beyond the classroom. He holds currently a position as Administrative and Financial Deputy Dean at the Islamic Azad University, Tonekabon Branch, Iran.

Ahmad Talebian is at the beginning of the research highway who recently earned his master in Educational Administration at Islamic Azad University, Tonekabon Branch, Iran. He is a talented and enthusiastic researcher who is preparing himself for PhD course.

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