



Canonical Correlation of the Dimensions of Philosophical Mentality with the Leadership Style

Ali Yousefi*, Ali Khaleghhah, Fazail Kiani

Department of Education, University of Mohaghegh Ardabili, Iran.

***Corresponding Author**

Abstract: *The purpose of this study was to investigate the relationship between the dimensions of philosophical mentality of principals with their leadership style. This descriptive study was correlational. The statistical population of this study was all male and female principals working in state schools of Bilehsuvar (Iran) city, which consisted of 100 people. According to Krejcie and Morgan table, a sample of 80 were selected randomly. To collect information, two questionnaires were used to measure the philosophical mentality of principals based on Smith's model with alpha coefficient of 0.73, and Hersey and Blanchard's Situational leadership style were used with alpha coefficient of 0.92. The research data after the collection were analyzed based on the research hypothesis and using the correlation analysis. The results of this study showed that, firstly, the variable of penetration has the highest weight in generating the canonical variable of the dimensions of philosophical subjectivity, and also the flexibility variable has the highest relation with the composite variable derived from dependent variables. Second, the weight of the common variance (canonical correlation squared) between these two categories of variables is approximately 42%, which is statistically significant with a value of $F= 398/3$, $df= 12$, $P < 0.0001$.*

Keywords: *Philosophical Mentality, Leadership Style, Canonical Correlation.*

INTRODUCTION

Nowadays, the importance of leadership style of principals and their psychological and personality traits in the organization are among the issues that are considered by policy makers in every country, although principals can not achieve organizational goals alone, without the use of motivated and capable people, leadership and management can be a solution to the problems of current societies. A principal with a high philosophical mindset in choosing a leadership style will apply a style that takes into account the expectations of employees and organizations in the long run, in other words, will be considered improving organizational performance and employee satisfaction. If during the selection and training of principals, using the findings of psychology, attention is paid to some of their personality traits, such as philosophical mentality, the expectation of efficient principals will not be futile.

Behavior and performance of principals is due to their leadership style, Therefore, managers need to improve the performance and effectiveness of as many subordinates as they themselves have direct impact on the performance of principals. In this position, employees will have a direct impact on the excellence and growth of the organization. for this purpose, it is necessary to identify the factors that are effective and relevant to the leadership style of principals.

Philosophical mentality

Human value is good in thinking. therefore, the question of thinking and correct thinking is one of the important issues that have engendered the minds of the scholars from a long time ago (Smith, 1991). Smith considers the philosophical mentality to be mental abilities that help one to think in the right way and make him accustomed to proper judgments (Smith, 2003). Smith has three dimensions for a philosophical mind and for each dimension, four signs or attributes are given below;

comprehensiveness dimension: A principal has an intellectual comprehensiveness that can relate the present to the future and looks at the phenomena with a systemic attitude and has the ability to generalize. Which itself has four basic components:

(a) To look at specific issues related to the broad field; (b) Linking immediate issues to long-term goals; (c) Exercise the power of generalization; (d) Patience in deep theoretical thoughts

penetration dimension: Then pondering means deep thinking and looking at phenomena with a deep look. A manager who ponderates the phenomena that are obvious and obvious to others is considered deeper, the components of which are:

(a) Questioning what is considered as obvious; (b) Discovery, and compilation of theories, questions and fundamental assumptions in a particular situation; (c) Sensitive to implicit meanings and affinities; Judgment in a inductive-deductive way.

Flexibility dimension: A flexible principal is not psychologically fit and has the ability to accept new methods and methods that are world-class and efficient, and by believing in collective wisdom and all sonority in achieving predetermined goals, the readiness of employee participation in solving problems Which includes the following components:

(a) Getting rid of psychological strain - Valuation of thoughts and opinions apart from their source; (b) Seeing issues in multiple directions, and creating alternatives to hypotheses

(c) Slowness in temporary and conditional judgments and interest in acting in an ambiguous position.

On the other hand, philosophical mentality is one of the characteristics of a person who can help managers when confronted with the numerous issues of educational leadership. In other words, a manager with a high philosophical mindset has a greater chance of succeeding in terms of long-term goals, creative generalizations, principled beliefs, and a range of logical choices.

Situational Leadership Style

Hersey and Blanchard, "describe leadership as having an impact on individuals in their work with desire" (Alwani, 2010, p. 141). Fred E, Fiedler, in the definition of leadership, said: "The leader is a member of a certain group who has been entrusted with the task of guiding and coordinating the activities of the working group" (Robbins, 2002, p. 191).

Situational leadership or situation-based management is presented by Paul Hersey and Kenneth Blanchard (1988) suggests that the effectiveness of leadership depends on the situation in which leadership is conducted. In theories of leadership, it is examined which things can make a person an effective leader. In this regard, many theories are presented that are divided into three groups as follows:

(A) personality theories that focus on the personality traits of the leader. (B) Behavioral theories that are intended to introduce leaders to their particular behavior and seek out the unique behavior of successful leaders. (C) Theories of Situational in which these theories take into account the situation and its effects. A lot of research has been done to distinguish the main factors that influence the effectiveness of leadership. Among the theories of necessity, Fiedler's theory, the theory of goal path and participatory leadership.

The situational leadership theory of Hersey and Blanchard, based on situational approaches, is in terms of the lack of belief in the existence of the best style, as in other relevant approaches (Rezaiean, 2000). Hersey

and Blanchard raise the question: "Is there something called the best leadership method?" Then they continue to: While some scholars such as Black and Mouth, or MacGregor believe, a leadership method called the best method It maximizes production, satisfaction, growth and progress in all organizational contexts and for all levels of manpower, but further research in the last few decades confirms the theory that " There is nothing called the best method" (Rezaian, 2000)

The Hersey-Blanchard model (Hersey & Blanchard, 1988) has been refined and is now represented as the Situational Leadership model (see Figure 1) (Northouse, 2007). It consists of the four distinct leadership styles and four developmental levels of followers. The four distinct leadership styles include: (a) directing, (b) Coaching, (c) Coaching, and (d) delegating.

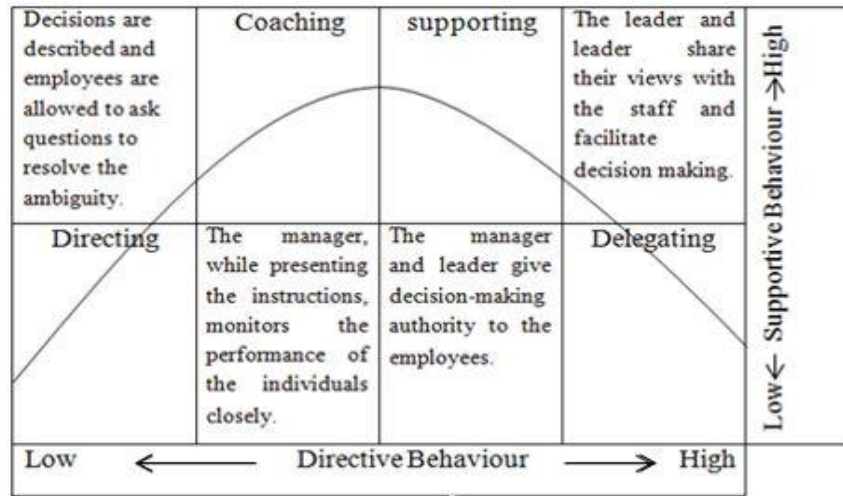


Figure 1: Situational leadership style based on the Hersey and Blanchard model

Directing: Leader focuses communication on goal achievement and spends less time using supportive behaviors

Coaching: Leader focuses communication on both goal achievement and Coaching subordinates' socioemotional needs and requires leader involvement through encouragement and soliciting subordinate input

Supporting: Leader does not focus solely on goals; rather the leader uses supportive behaviors to bring out employee skills in accomplishing the task, and the leader delegates day-to-day decision-making control, but is available to facilitate problem solving

Delegating: Leader offers less task input and social support, lessens involvement in planning, control of details, and goal clarification, and gives subordinates control and refrains from intervention and unneeded social support

Each style emphasizes a combination of relation -oriented and task-oriented leadership behaviors. This leadership attitude requires that the leader has the ability to recognize the situation and then select and apply the appropriate leadership style. This theory pays special attention to followers and their feelings about the task they are engaged in. It also emphasizes that an efficient leader re-evaluates the situation over time and gives special attention to the changes that have taken place at the level of human readiness (Shermornhorn, et al. 1999).

Since philosophical mentality of individuals is different, and the logical thinking or philosophical mentality of managers affects decisions and their leadership behavior, individuals with different philosophical thinking can expect different behaviors or leadership styles.

Since little research has been carried out inside and outside the country on the relationship between the philosophical mentality and leadership style, researchers further attribute the relationship of philosophical subjectivity to creativity, management, creativity, decision making, mentality and teacher participation, job interest, and managers' performance. And ability to perform managerial tasks. Therefore, it is necessary to do this research to a large extent. It is hoped that the results of this study will provide a good basis for further research on the subject in the educational organizations.

Research Methodology

The present research is a descriptive correlational study in applied research. The statistical population of this study was all male and female managers working in state schools of Bilesuvar city, which consisted of 100 people. According to Krejcie and Morgan table, a sample of 80 were selected randomly. In this study, two types of questionnaires were used to collect the data, which are presented below.

Leadership Style Questionnaire: To assess leadership style, a standard questionnaire describing "effectiveness and flexibility" was used. The questionnaire describes 12 situations, and there are 4 answers for each position; each of the responses represents one of the leadership styles defined in the Hersey and Blanchard Situation Leadership Theory, developed by Hersey-Blanchard. Based on this questionnaire, each manager's score is highlighted. The reliability of this questionnaire is estimated to be 0.92 using Cronbach's alpha coefficient.

Philosophical Mentality Questionnaire: To measure the philosophical mindset, a philosophical mentality questionnaire for managers was developed based on Smith's model adapted from the research work of Saif Hashemi and Rajaipour (2004). The questionnaire contains 42 questions that assesses the philosophical mentality of managers in three categories: comprehensiveness, mediation, and flexibility. The reliability coefficient of this questionnaire is estimated to be 0.73 using Cronbach's alpha coefficient.

Research Findings

The correlation analysis focuses on the relationship between two sets of variables in a group (Hooman, 2016). Before analyzing the data, the assumptions of multivariate analysis of variance, and the results of the skewness and stretch of variables showed that the distribution of test scores was normal. The set of predictor variables consists of 3 variables (comprehensiveness, penetration, and flexibility) and a set of dependent or criterion variables in 4 variables (directing, Coaching, Supporting and delegating).

Research hypothesis: There is a meaningful relationship between the dimensions of philosophical mentality (comprehensiveness, penetration, flexibility) and leadership style (directing, Coaching, Supporting, and delegating).

Table 1. Descriptive statistics, mean, standard deviation and Pearson correlation coefficient

Var	Di	M	SD	1	2	3	4	5	6	7
Philosophical mentality	1	29.15	12.15	1						
	2	28.87	10.85	0.59**	1					
	3	30.26	10.45	0.70**	0.54**	1				
Leadership style	4	2.42	0.75	0.19	0.06	0.17	1			
	5	5.47	0.82	0.37**	0.30**	0.38**	0.09	1		
	6	2.73	0.61	0.39**	0.45**	0.36**	-0.22	0.30**	1	
	7	1.30	1.28	-0.46**	-0.45**	-0.50**	-0.47**	-0.78**	0.46**	1

Variables: (1) comprehensiveness, (2) penetration, (3) flexibility, (4) directing, (5) Coaching, (6) Supporting (7) delegating

According to the results of Table 1, there is a positive correlation between comprehensiveness, meditation and flexibility with directing, coaching and Coaching style, and there is a negative correlation with the delegating style (P= 0.01).

To analyze this hypothesis, canonical correlation was used. Table 2 shows the results of significant tests for the complete model of canonical correlation analysis.

Table 2. Multivariate Tests of Signification

Test Name	Value	Aporox. F	Hypoth. DF	Error DF	Sig of F
Pillais	0.421	3.06	12	225	0.0001
Hotelling	0.619	3.70	12	215	0.0001
Wilks	0.602	3.39	12	193	0.0001
Roys	0.355	-			

The most commonly used statistic is Wilks L. for a significant level test. The Wilkes test, which is in fact the most important multivariate test, represents a non-deterministic factor. This statistic in this study is equal to 602; in other words, about 60% of variance of dependent variables (leadership style variables) is predicted by variables other than dimensions of philosophical mentality. Table 2 shows a meaningful amount of Wilkes Lambda value that exists between two sets of focal correlation variables. (Wilks L. 602, F = 3.39, and P< 0.0001). So, and with meaningful multivariate statistics, we can accept the overall meaning of the model.

Table 3. Eigenvalue canonical and correlation of philosophical mentality and leadership style

Root No.	Eigenvalue	Canon cor.	Cum. Pct.	Pct.	Sq. Cor.
1	0.550	0.595	88.915	88.915	0.353
2	0.050	0.218	96.988	8.078	0.047
3	0.018	0.135	100	3.011	0.018

The values of Table 3 refer to simple correlation and squared, among the combined variables derived from independent and dependent variables. The focal correlation of functions is equal to 0.595, 0.218 and 0.135 respectively. The simple correlation between the first combined variable derived from independent variables and dependent variables is equal to 0.595.

The second focal correlation obtained by calculating the simple correlation between the pair of the next composite variable is 0.218. The third focal correlation is 0.135. Functions that explain less than 10% of variance should be discarded and not interpretable.

Therefore, the first function with a correlation squared is interpreted about 35%. It should be noted that in the present study, a minus of Wilkes' Lambda (1 - .0602) is equal to 0.398 if the total squared of all correlations is 0.418.

The orthogonal nature of focal correlation functions makes it possible for subsequent functions to absorb the amount of variances remaining in the observed variables, and thus, in most cases, the total size of the entire effect The functions are larger than the effect size of the overall research model.

Table 4. Dimension Reduction Analysis

Roots	Wilks L.	Hypoth. DF	F	Error DF	Sig of F
3 to 1	0.602	12	3.398	193	0.0001
2 to 3	0.934	6	0.844	148	0.0538
3 to 3	0.981	6	0.699	75	0.500

Investigating the diminishing dimension of the later and the significant levels associated with them show that the significance of the dimension (1 to 3) is similar to that of the overall model. These three multivariate tests, test the overall model between the two variables; in other words, these tests evaluate the variance between independent and dependent variables on the level of all canonical functions (derived from three pairs of combined variables).

The results of Table 4 of F test show that two focal correlations are statistically significant. In this regard, the common variance part between the three composite variables derived from independent variables with four composite variables derived from dependent variables with $F= 3.398$ and $df= 12$ at level $P< 0.0001$ are statistically significant.

In the present study, two focal points were considered that both dimensions were significant. But since the focal correlation of the first dimension is greater, the first dimension was chosen as the strongest focal correlation. Due to the error caused by various comparisons, there is no known known method for the significant correlation between the two correlations (0.053, 0.500)

It needs to be explained that in the later reduction section, a statistically meaningful statistical method is used for the hierarchical. So that in the second dimension (2 to 3) the sum of the variance obtained from the second and third pairs of combined variables is tested (0.018 + .047) and in the third dimension (3 to 3), which is 0.018 be tested individually. Considering the weight of the first correlation, it can be deduced that the overall model is likely to be significant due to the first correlation.

Tables 5 and 6 show the standard and structural canonical coefficients for all the predictive and dependent variables in the first function. These coefficients are in fact the correlation between each set of predicate variables and dependent on each of the focal pixels, which is expressed only for the first function, which is the strongest canonical correlation. Given that in this study the correlation coefficient value of the first function is significant, so there is no need to check the values of functions 2 and 3.

Table 5. The standardized and structural coefficients of dependent variables in the first function

Variable	Standardized coefficients	structural coefficients
directing	0.008	-0.237
Coaching	0.072	-0.652
Supporting	-0.461	-0.789
delegating	0.754	0.907

Analysis of the variables is done through the examination of standard and structural coefficients. Standardized canonical coefficients are the same standardized regression coefficients in regression analysis and show the importance of variables in the set. In other words, according to the standard coefficients, we can judge the relative importance of the role of variables in the variance of the two independent and dependent variables.

According to Table 5, in increments of one unit in the standard deviation of the transposed variable, an increment of 0.754 in standard deviation will occur in the first focal variable derived from the dimensions of philosophical mentality. According to the standard coefficients, we can judge the relative importance of the role of variables in the variance of two independent and dependent variables.

Table 5 also shows the structural coefficients of the first function, with a variable variable with a weight of 0.907, which has the greatest effect on the linear composition of dependent variables; the simple correlation between this combined variable with Supporting style is equal to -0.789, with an 5 Coaching style equal to 0.652 - and by an directing style of 0.232.

Table 6. The standardized and structural coefficients of the independent variables in the first function

Variable	Standardized coefficients	structural coefficients
comprehensiveness	-0.271	-0.846
penetration	-0.465	-0.859
flexibility	-0.424	-0.870

Here, at first, three variables are made up of a combination of dependent variables, and then the relationships between them are evaluated with independent variables. The relationship between standard coefficients of comprehensiveness, penetration and flexibility with the first combined variable derived from dependent variables is -0.271, -0.465 and -0.424 respectively; in other words, the variable of penetration is the most important and comprehensiveness of the weakest variable. There are relationships with the first combination variable derived from the variables of the situational leadership style. Structural coefficients are used to explain whether increasing or decreasing the scores of independent variables is associated with increasing or decreasing in dependent variables. The structural coefficients of independent variables indicate the importance of the standard coefficient of comprehensiveness (-0.486), penetration (-0.859) and flexibility (-0.870), it can be said that the higher the comprehensiveness, flexibility and penetration, the score of them is lower in directing style (-0.227) and Coaching style (-0.652) and Supporting style (-0.779), and in delegating style (0.907).

Discussion and Conclusion

The present study aimed to investigate the relationship between focal correlation between two sets of variables. The results showed that, according to the first function, directing, Coaching, Supporting, delegating variables are predicted with a set of variables of comprehensiveness, penetration and flexibility. Also, the results of this study by canonical correlation analysis showed that firstly, the variable of reasoning has the highest weight in generating the focal variable of the dimensions of philosophical subjectivity, and also the flexibility variable has the highest relation with the composite variable derived from dependent variables. Second, the weight of the variance of the two variables is approximately 42%, which is statistically significant with a value of $F= 3.398$ and a $df= 12$ at the level of $P < 0.0001$.

In general, given the importance of team and position leadership and considering that having a philosophical mindset can affect all the personality and behavioral and organizational characteristics of managers, and since the philosophical mentality of the manager is an influential factor in applying team leadership style and managerial position, in order to increase the level of performance of managers in choosing managers, they should consider their philosophical mentality.

Logical thinking or philosophical mentality of managers affects decisions and their leadership behaviors, individuals with different philosophical thinking can expect different behaviors or leadership styles. Philosophical mentality is a tool to help managers in their thinking. It is reasonable to expect a manager who is comprehensiveness, penetration and flexibility in his thinking to have a different impact on his actions than a manager whose thinking does not have such qualities. Therefore, managers should be equipped to organize and direct resources to a type of thinking that is comprehensiveness, penetration and flexibility in terms of different situations.

In the management discussion, most of the experts who think about the efficiency of individuals in the organization and those who think about the effectiveness of the people in the organization believe that the atmosphere governing the organization should be such that it leads the employees to think and this idea is to improve the efficiency and Performance is very important. Using the power of thought and thought makes it possible to prevent the loss of capital, time and labor, resulting in a desirable effect in terms of achieving the goals and increasing the efficiency, both qualitatively and quantitatively. This type of attitude plays a more important role in educational institutions (Smith, 2003).

Managers of organizations with a high philosophical mindset can create an environment with mutual understanding and mutual trust so that high-level employees feel satisfied and secure. Therefore, managers with a high philosophical mentality showed better performance in management tasks than those with a low philosophical mentality. Therefore, it can be concluded that the manager has a high philosophical mentality

in choosing a style of leadership style that addresses the expectations of employees and organizations in the long run, in other words, improving the organization's performance and satisfaction of the creators.

Based on the results of this study, the following suggestions are presented to the education managers:

- a) In the selection and appointment of school principals, philosophical subjectivity will look at them, since individuals with a philosophical subjectivity are more likely to have more creativity.
- b) Publishing the articles and research results in the area of creativity and philosophical mentality in journals and other sources of study, directors to the importance of philosophical mentality and creativity.

References

1. Alwani, S. M. (2010). Public Administration, Tehran: Nashre nei Publishing.
2. Hersey, P., & Blanchard, K. (1988). Management of organizational behavior Utilizing human resources (5th ed.). Englewood Cliffs, NJ Prentice-Hall.
3. Hooman, H. A. (2016.) Multivariate Analysis of Behavioral Research. Tehran. Publisher Peyke Farhang.
4. Northouse, P. (2007). Leadership: Theory and practice (4th ed.). Thousand Oaks, CA Sage Publications.
5. Rezaian, A. (2000). Organizational Behavior Management, Tehran, Sadegh.
6. Robbins, S. P. (2002). Organizational Behavior, Translators Ali Parsayian and Seyed Mohammad Arabi, Volume II, Tehran: Cultural Studies.
7. Saif Hashemi, F.; Rajaipour, Saeed (2004). The study of the relationship between philosophical mentality and creativity of high school principals in the city of Isfahan. Quarterly Journal of Education, Vol 20, No. 1.
8. Shermorhorn, J. R., James J. Hunt and Richard Ann Osborne (1999). Organizational Behavior Management, Translated by Mehdi Irannejad Parizi, Tehran: Research and Management Training Institute.
9. Smith, Philip G. (1991). Philosophical mentality in educational management. (Translation by Mohammad Reza Barni). First Printing, Tehran: Golchin Publications.
10. Smith, Philip J. (2003). Philosophical Mind in Educational Management, Translation by Mohammad Reza Behrangi, Tehran: Kamal Tarbitat Publication.