

Study the Effect of the Philosophical Mind Aspects on University Staff Creativity

Case Study: Islamic Azad University, North Tehran Branch

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ABSTRACT

The present study was carried out to investigate the impact of philosophical mentality aspects on the creativity of the University staff, in Islamic Azad University, North Tehran Branch, in 2012. The research methodology was a descriptive - correlative method. The statistical population of the research included all the staff of the North Tehran Branch, Islamic Azad University, as 650 subjects, of which a number of 242 samples were extracted using the Morgan Table by randomized study method. The research instrument was a researcher-made questionnaire, which was composed of two components including philosophical mentality and creativity. The calculated Cronbach's alpha for each component of the questionnaire was obtained as 0.74 and 0.88. The studied components of philosophical mentality in this research included comprehensiveness, contemplation, and flexibility. The results of the research demonstrated a significant relationship between the comprehensiveness, contemplation, and flexibility components with the employees creativity ($p < 0.01$). Also, the results of multivariate regression showed that among the elements of philosophical mentality, respectively, the comprehensiveness component with the beta value as 0.32, the contemplation component with the beta of 0.22 and the flexibility component with the beta value as 0.19 had the power to explain the dependent variable of the employees' creativity.

KEYWORDS: philosophical mentality; Comprehensiveness; Contemplation; Flexibility; Creativity; University staff.

1. INTRODUCTION

With the rapid development of science and technology, the societies need skills to keep pace with the development of science and technology and made themselves consistent with the changes to remain in the competition of progress in science and technology. Development of creative and innovative people can largely guide the communities in reaching to such a goal that the humans can communicate each other in the shadow of creative thinking and overcome the problems by utilizing the collective knowledge and generating new ideas [3].

Twentieth century, and especially the recent decades, can be known as the years with rapid expansion of creativities and innovations; thus, today's era, can be called as the age of information changes, explosion of knowledge, technology, more extensive explorations, age of communication and research. In this era, to manage the various social, cultural, economic and educational organizations, we need innovation, modernism, and enjoying of moral, scientific, technical and human achievements and make it easy in these organizations for innovation and providing good plans to select inventive employees for different categories.

The importance of this issue in the educational systems as the basis and pillar of any changes in the society is considered more significantly, since the philosophy of such systems is to improve the quality of human sources. One of the most valuable resources in educational systems and centers includes the active staff in this sector. The presence of thoughtful and creative employees can make such an institution strong and powerful in achieving educational and developmental purposes. In fact, the employees of the university are one of the elements playing a role in the internal and external efficiencies, and it seems that having philosophical mentality and logical thinking has a great influence in the development of creativity, which is followed by a holistic progress in training and educational centers.

Also, the staff awareness of the crucial role of their philosophical mentality and creativity and its impact on organizational performance improvement will make them improving these two categories and recalling the university officials and managers to provide the requirements for enhancement of the employees' creativity and philosophical mentality, which would be effective in improving the performance and enhancing the quality of education. Given the importance of the issues mentioned, it seems a little research has been done to explain the relationship between philosophical mentality and creativity rate of the universities' employees, and many questions have been left unanswered in this field, such as: What is the situation of educational centers staff regarding philosophical mentality and creativity? Is there any relationship between their philosophical mentality and creativity? How can the abilities associated with the staff philosophical mentality and creativity be boosted?

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Given the above, this study was performed aiming at investigating the relationship between the philosophical mentality and the creativity of the university academic staff in Islamic Azad University, North Tehran Branch to achieve some results on the relationship between the philosophical mentality and creativity among the staff of the educational system.

Theoretical definitions of philosophical mentality and creativity

Some researchers consider thinking as a process that organizes the previous experiences of an individual, such as Venyak who defines thinking in his book, *Psychology of Thinking*, as follows: "Thinking is organizing and reorganizing of the past learning to be used in the current situation."

Eson considers thinking as an encoded inner process that results in a cognitive domain, which will alter the cognitive system of a thoughtful person. Solso believes that thinking is a process through which a new mental representation is developed by information converting and interaction between mental qualities, judgment, abstraction, reasoning and problem solving [4].

Thinking and the right-thinking skills are important issues that have occupied the scholars' mind. Thinking is one of the fundamental issues in education and pedagogy that needs some tools for its development, one of which is having a philosophical mentality that helps people in correct and logical thinking [16].

A philosophical mentality provides a person some sort of insight and knowledge that he can prevent narrow-mindedness, self-centeredness and unilateral vision in dealing with the problems. It also helps him to make decisions about things logically by required knowing and recognition.

The importance of the philosophical mentality

Smith (2004) considers the philosophical mentality as mental abilities and characteristics helping an individual in thinking correctly and familiarizes him with having the correct judgments. He has held three dimensions for philosophical mentality, and four signs or properties for each dimension as follows:

Comprehensiveness: Comprehensiveness is one of the components of the philosophical mentality, which means having the long-term goals, attempts to obtain extendable ideas, attention to special circumstances in relation with broad fields and showing tolerance against different and various opinions.

1. Looking at particular cases in relation to broad fields
2. Relating the immediate issues to long-term goals
3. Applying generalizing force
4. Fortitude, and reflecting on the deep theoretical thoughts

Contemplation: It means questioning the axioms, discovery of fundamental theories in specific situations, sensitivity to the relationships between the issues and using the inductive - deductive hypothesis.

1. Questioning what others consider clear and obvious.
2. Discovery and development of foundations (Discovery of fundamental issues and explaining them in any position)
3. Attention to indications and issues related to fundamental aspects in every position
4. Predicating expectations on hypothetic- deductive current and judgment and sentencing accordingly.

Flexibility: It means the absence of intellectual rigor, examining the opinions away from the influence of their resources, reviewing the issues from various aspects and avoidance of making certainty to the ideas.

1. Getting rid of mental rigorousness
2. Evaluation of thoughts and ideas regardless of their sources
3. Considering issues from multiple directions
4. Accepting temporary and conditional theories or judgments and making decisions in ambiguous situations with deliberation and patience in this matter

Anyone who is thinking philosophically will reveal the above features in his thoughts and judgments. We should point out that these indications and symptoms are characteristic that a person shows in his thinking. They are the individual characteristics rather than his thought characteristics [15].

Creativity and the staff

Increase in creativity in organizations can lead to the improvement of the quantity and quality of services, reduced costs, preventing the resources wasting, reduced bureaucracy, increased competition, increased efficiency and productivity, employees' motivation and job satisfaction. The manager's role is in fostering creativity, stimulating and motivating the staff, empowering the staff, finding the creative minds and using the creativity of others. The collaborative management system plays an important role in fostering the employees' creativity by relying on the staff self-control, consultation, encouraging the initiation and respecting the individuals [11].

Because creativity is a complex term, a common definition with all the experts' consensus has not been proposed. Some other definitions on creativity are given in the following:

- Izeng, Arnold and My lee (1979): Creativity is a mental process that leads to problem solving, idea-making, conceptualizing, creating artwork, theorizing and products that would be innovative and unique.
- Weber psychology dictionary: "Creativity is the capacity to see new relationships, creating unusual thoughts and distancing from traditional patterns of thinking."
- Webster's dictionary (2003): "Creativity includes the power and the ability to create new ideas or use them in a new form through mental skills." [20].
- Torrance (1998): "Creativity is a process that includes sensitivity to the problems, deficiencies, bottlenecks and inconsistencies. It is a kind of sensitivity that arises after identifying of the problem or problems, and is followed by the start of searching for finding solutions and developing hypotheses for this purpose. Then, the hypotheses are tested and adjusted, and the final results are obtained." [14].
- Vaizwberg (1992): Creativity means development of new and valuable achievements based on a kind of thinking that almost exists in everyone [17].
- Vernon (1989): Creative is the individual's ability in developing ideas, theories, insights or new objects and reconstruction in the sciences and other fields that is considered as an innovative phenomenon by the experts and known scientifically, aesthetically, technologically and socially valuable. Taylor considers creativity as shaping the experiences in new organizations [4].

According to the above definitions, if we extract the theoretical basics, key points and the common features of the mentioned definitions and collect them together, we can find some prominent features regarding the creativity, which can significantly describe it. These features include:

1. Creativity is a mental – intellectual process.
2. The creativity product can emerge as the form of a work, an idea, a solution, an object or any other thing.
3. The creativity product is a novel and new phenomenon (innovation).
4. The creativity product is a work that has value as well as the novelty.
5. Creativity is a general ability and almost exists in everyone.
6. Creativity can be nurtured and correlates directly to the socio - cultural environment [17].

An overview of the research conducted in relation to the philosophical mentality and creativity:

Ruskin (1995) following the frequent research on the personality characteristics of the creative managers came to the conclusions that the managers who received high scores on the creativity test would not be affected by the resources in their judgments and act independently. Assertiveness, dominance and interest to personal power are more in them [6].

A study was performed by Ford (1998) in relation to the managers' opinions about the important factors of creativity in U.S. educational organizations. At the first stage, the views of 169 managers were identified on important factors in creativity. At the second stage, 46 managers were instructed indirectly and a clear difference was observed between the two basic views and attitudes after training. The research result showed that there was a relationship between the managers educational degrees and their creativity, meaning that, the greater the degree, the higher creativity. However, the direct relationship was due to the creativity development trainings along with their academic education [2].

Smith (1965) conducted a research in order to study the impact of the philosophical mentality on good human relations and rate of managers' creativity as well as the schools employees 'morale in Virginia. The statistical samples were selected from the managers of 46 schools in the state. The research results showed that there was a direct relationship between the philosophical mentality of the managers with good human relations, the creativity rate of managers and the employees' morale. In this study, significant differences were found between the characteristics such as age, work experience and the managers' educational degrees with their philosophical mentality. However, the difference between the creativity scores in two groups of male and female was significant. The teachers in this study reported that they come to an agreement more comfortably with the managers who have a higher philosophical mentality [18].

MacKinnon (1962) studied the creative individuals' attitudes towards themselves in a research. The creative people showed a positive image of themselves in responding to the Goff characteristics questionnaire. The study was conducted on creative architects, directors and artists and in the study results, each of the studied groups stated some attributes in describing themselves. The architects described themselves as active, inventive, artist and clever persons. The managers described themselves as logical, hardworking, friendly, flexible and courageous persons with a spirit of cooperation and different interests [8].

Sborn (1975) has done a lot of research concerning the impact of gender and education on creativity and come to the conclusion that women are better than men in developing newer and more innovative ideas. Also, there is little difference between those with higher academic degrees and those without such degrees [10].

Yadegari (2000) conducted a study titled as "Study of the philosophical mentality of educational managers and its relationship with their administrative tasks from the viewpoint of High school teachers in Tehran ". The results showed that the managers with philosophical mentality are more capable in doing their management tasks, and their philosophical mentality and performance are higher than the theoretical moderate range. Also,

there is a significant and positive relationship between the philosophical mentality of the managers and their performance [19].

Saif Hashmi (2004) in a study titled as "The relationship between philosophical mentality and creativity of Isfahan school administrators" achieved the results that there is a positive relationship between the philosophical mentality and the creativity of the managers. Also, there is a relationship between each of the philosophical mentality aspects with creativity. No significant differences were found between the philosophical mentality and its dimensions with the managers' creativity considering the characteristics such as age, work experience, education degree, educational field and the type of public and nonprofit school; however, a significant difference was observed between the gender feature of the managers and their creativity so that the creativity in female managers was higher than the male managers.

Kandi (2006) in a research titled as "Study the relationship between the philosophical mentality and the managers of PNU branches and centers in District 6" came to the conclusion that there are relationships between each of the elements of philosophical mentality (comprehensiveness, contemplation and flexibility) and the education degrees and work experience of the managers of academic branches and centers [5].

Nikkhah (2008) conducted a study entitled as "Philosophical mentality and its aspects in teachers and sport trainers in city of Golpayegan" and found that the teachers and sport coaches were in a moderate condition regarding the philosophical mentality, and the mean score of the teachers was better than the sport trainers. Among the three dimensions of philosophical mentality, the comprehensiveness achieved the highest score in the sample. Also, education had a significant effect on the philosophical mentality[9].

Research Questions

1. Is there a significant relationship between the comprehensiveness component and the creativity rate of the university staff?
2. Is there a significant relationship between the contemplation component and the creativity rate of the university staff?
3. Is there a significant relationship between the flexibility component and the creativity rate of the university staff?
4. Is there any significant relationship between the various aspects of the philosophical mentality and the creativity rate of the university staff?

MATERIALS AND METHODS

This was an applied study conducted by descriptive - correlational method. The statistical population included all employees of Islamic Azad University, North Tehran Branch as 650 subjects of which 242 subjects were selected based on Kerjesi-Morgan Table as samples by a randomized method. Two types of questionnaires were used in this study to collect data. The research measurement tool was a researcher-made questionnaire that its first part was related to the study of philosophical mentality of the university employees prepared based on Smith model, and the second component had been prepared to measure the creativity rate of the university staff by integration of Ravdesp (1997) and American Association Creativity Questionnaires and Torrance Creativity Assessment Questionnaire. The components of the philosophical mentality studied in this research included comprehensiveness, contemplation, and flexibility. The questions were set based on the 5-category Likert scale (very low: 1, low: 2, somewhat: 3, very: 4 and very much: 5) and were measured after computing the statements at the interval level. To determine the reliability of the research instrument, the questionnaires were distributed among 30 employees that the obtained Cronbach's alpha coefficients were respectively as 0.74 for the "philosophical mentality" questionnaire and as 0.88 for the "creativity questionnaire".

In this study, the personal characteristics of employees included gender, age and years of service. Data analysis was calculated according to the research questions through correlation analysis, ANOVA and multivariate regression and by SPSS software.

Research findings

A. Surveying the respondents' personal characteristics

The results of the study of the respondents' personal characteristics in table 1 show of the total 242 subjects studied, 119 subjects (49.2%) were male and 123 subjects (50.8%) were female. Regarding the age, the most frequent age range was in the 31-40 years old category (52.5%). In terms of work experience, the most frequency was in the 11-15 years category (50.4%).

Table 1–Frequency distribution of individual characteristics of the respondents

Individual characteristics	Categories	Frequency	Percentage	Cumulative percentage
Gender	Male	119	49.2	49.2
	Female	123	50.8	100
Age	30>	34	14.0	14.0
	31-40	127	52.5	66.5
	41-50	66	27.3	93.8
	51 <	15	6.2	100
	5 >	25	11.0	11.0
Years of Service	6-10	60	26.3	37.3
	11-15	115	50.4	87.7
	16-20	25	11	98.7
	21 <	3	1.3	100
	Not answered	14	-	-

B. Answering to the research questions

1. Is there a significant relationship between the comprehensiveness component and the creativity rate of the university staff?

The regression method was used to answer this research question.

Table 2: Regression of comprehensiveness with the increase rate in creativity

R	R ²	Adjusted R Square	Std. Error of the Estimate
0.428	0.183	0.180	6.756

The above table shows the correlation coefficient, the square of correlation coefficient or the determination coefficient so that the correlation rates between the above variables would be as 0.42 and at a moderate level. Also, the determination coefficient indicates that 18 percent of the dependent variable changes of creativity can be explained by the independent variable of comprehensiveness.

Table 3: ANOVA

	Sum of Squares	Mean Square	df	F	Sig
Regression	2448.577	2448.577	1	53.648	0.000
Residual	10908.228	45.641	239		
Total	13356.805		240		

The significance level presented in the table above, considering the fvalue equal to 53.64 and the significance level less than 0.05, indicates the verification of the regression model and that the independent variable is able to predict the dependent variable changes.

Table 4: The coefficients values of the independent variables in terms of standard and non-standard values

Independent Variable	Un Standardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	46.304	3.548	-	13.050	0.000
Comprehensiveness	0.685	0.094	0.428	7.325	0.000

The correlation between comprehensiveness and the degree of increased creativity showed that the comprehensiveness with the beta value of 0.42 has the power to explain the dependent variable. Thus, a positive and direct correlation can be seen between the two variables.

2. Is there a significant relationship between the contemplation component and the creativity rate of the university staff?

The regression method was used to answer this research question.

Table 5: Regression of contemplation with increased creativity rate

R	R ²	Adjusted R Square	Std. Error of the Estimate
0.371	0.138	0.134	6.942

The above table shows the correlation coefficient, the square of correlation coefficient or the determination coefficient so that the correlation rates between the above variables would be as 0.37 and at a low

level. Also, the determination coefficient indicates that 13 percent of the dependent variable changes of creativity can be explained by the independent variable of contemplation.

Table 6: ANOVA

	Sum of Squares	Mean Square	df	F	Sig
Regression	1840.118	1840.118	1	38.187	0.000
Residual	11516.687	48.187	239		
Total	13356.805		240		

The significance level presented in the table above, considering the f value equal to 38.17 and the significance level less than 0.05 indicates the verification of the regression model and that the independent variable is able to predict the dependent variable changes.

Table 7: The coefficients' values of the independent variables based on standard and non-standard values

Independent Variable	Un Standardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	50.124	3.583	-	13.988	0.000
Contemplation	0.613	0.099	0.371	6.180	0.000

The correlation between contemplation and the degree of increased creativity showed that the contemplation with the beta value of 0.37 has the power to explain the dependent variable. Thus, a positive and direct correlation can be seen between the two variables.

3. Is there a significant relationship between the flexibility component and the creativity rate of the university staff?

The regression method was used to answer this research question.

Table 8: The regression of flexibility with the increased rate of creativity

R	R ²	Adjusted R Square	Std. Error of the Estimate
0.307	0.094	0.090	7.115

The above table shows the correlation coefficient, the square of correlation coefficient or the determination coefficient so that the correlation rates between the above variables would be as 0.30 and at a low level. Also, the determination coefficient indicates that 0.09 percent of the dependent variable changes of creativity can be explained by the independent variable of flexibility.

Table 9: ANOVA

	Sum of Squares	Mean Square	df	F	Sig
Regression	1258.755	1258.755	1	24.876	0.000
Residual	12098.050	50.619	239		
Total	13356.805		240		

The significance level presented in the table above, considering the f value equal to 24.86 and the significance level less than 0.05 indicates the verification of the regression model and that the independent variable is able to predict the dependent variable changes.

Table 10: The coefficients values of the independent variables based on standard and non-standard values

Independent Variable	Un Standardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	53.903	3.677	-	14.660	0.000
flexibility	0.517	0.104	0.307	4.987	0.000

The correlation between flexibility and the degree of increased creativity showed that the flexibility with the beta value of 0.30 has the power to explain the dependent variable. Thus, a positive and direct correlation can be seen between the two variables.

4. Is there any significant relationship between the various aspects of the philosophical mentality and the creativity rate of the university staff?

The regression method was used to answer this research question.

Table 11: The regression of the philosophical mind aspects with creativity rate

R	R ²	Adjusted R Square	Std. Error of the Estimate
0.530	0.281	0.272	6.367

The above table shows the correlation coefficient, the square of correlation coefficient or the determination coefficient so that the correlation rates between the above variables would be as 0.53 and at a moderate level. Also, the determination coefficient indicates that 0.28 percent of the dependent variable changes of creativity can be explained by the independent variable of philosophical mentality aspects.

Table 12: ANOVA

	Sum of Squares	Mean Square	df	F	Sig
Regression	3750.197	1250.066	1	30.840	0.000
Residual	9606.608	40.534	239		
Total	13356.805		240		

The significance level presented in the table above, considering the f value equal to 30.84 and the significance level less than 0.05 indicates the verification of the regression model and that the independent variable is able to predict the dependent variable changes.

Table 13: The coefficients values of the independent variables based on standard and non-standard values

Independent Variable	Un Standardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	27.965	4.674	-	5.982	0.000
Comprehensiveness	0.518	0.093	0.323	5.551	0.000
contemplation	0.374	0.098	0.226	3.835	0.000
Flexibility	0.320	0.097	0.190	3.313	0.000

The correlation between philosophical mentality aspects and the degree of increased creativity showed that the comprehensiveness with the beta value of 0.32 is in the first order; the contemplation with the beta value of 0.22 is in the second order and the flexibility with the beta value of 0.19 is in the third order.

RESULTS

Given the importance of philosophical mentality and the creativity of employees, the relationship between the philosophical mentality and the creativity degree of employees in Islamic Azad University, North Tehran Branch was studied in the present research.

The results obtained from the correlation coefficient showed that there are significant relationships between the components of comprehensiveness, contemplation and flexibility with the employees' creativity ($p < 0.01$). The achieved results are in agreement with the research results of Saif Hashmi (2004) and Smith (1965) [12]. Since the features of a philosophical mentality in three aspects of comprehensiveness, contemplation and flexibility are essential to rational thinking, then, an innovative or creative individual benefits from the analytical or logical thinking, which is dependent on the philosophical mentality. Also, as the philosophical mentality feature in the comprehensiveness aspect includes looking at specific issues in relation to the broad field and relating the immediate issues to the long-term purposes and use of the generalization power and patience in the deep theoretical thinking, the individuals would also need such features to have creativity. Thus, we can say that the staff with the comprehensiveness aspect of philosophical mentality would also benefit from the creativity.

In general, a creative person transforms his way of thinking and does not assume the issues around as certain and firm objects and always views them with skepticism. An employee who has such features of a philosophical mentality, including questioning of the axioms and the basics and sensitivity to the implicit issues and uses deductive methods can be a creative person; as these features can develop creativity in a person. Therefore, the contemplation dimension of the philosophical mentality is related to the employees' creativity degree.

Since the intellectual and mind features in this aspect, encompassing freedom from the intellectual and psychological rigorousness and assessment of ideas regardless of their source and attention to the various aspects of the issues and postponing the conclusive judgments, these features would be very effective in individual creativity. As Osborn (1997) found in his studies that delaying the judgments will cause the creation of new ideas and opinions. Thus, we can conclude that the flexibility aspect of the philosophical mentality has a relationship with the increased creativity in employees.

Reviewing the results of the research questions and the discussions related to each of the questions, it can be concluded that the employees need logical thinking to have creativity, and such a logical thinking is owed to the

philosophical mentality. The employees with characteristics of philosophical mentality have a wide view toward the theorems and are sensitive to personal issues and relationships; they become free of intellectual rigorosity and show tolerance in their judgments that such patience in judgments leads to creation of new ideas.

Also, the results of multivariate regression showed that the comprehensiveness aspect of the philosophical mentality with the beta value of 0.32 has more relation with the creativity, and the contemplation and flexibility aspects with beta values as 0.22 and 0.19, respectively, associated with creativity in the second and third orders.

Suggestions

According to the research findings and identifying the relationships between the philosophical mentality aspects and the creativity degree of the employees, the following suggestions are recommended to the officials and planners in universities and centers of higher education:

- Examining the philosophical mentality in selection and appointment of their staff. Since, the people with a desirable philosophical mentality will have more creativity.
- People who have good philosophical mentality and new ideas should be encouraged and while introducing them to others, the grounds for transferring their experiences and thoughts to others should be provided to improve the philosophical mentality and improve creativity of other employees.
- The grounds of presentation and development of the philosophical mentality should be trained to the employees through in-service courses to increase the emergence of ideas and creative thoughts in them.
- Officials and employees should become aware of the importance of the philosophical mentality and creativity thinking by publishing the articles and studies results on philosophical mentality, imagination and creativity in journals and other research resources.
- Considering the existence of a relationship between the philosophical mentality and creativity degree of the employees, they have to show a proper behavior on emotional affected situations and make logical thinking as the basis of all their actions and behaviors to further increase in their creativity.
- They have a view breadth in the study of phenomena and the university issues (as one of the characteristics of the comprehensiveness aspect of the philosophical mentality), and shall review the issues from different angles and various ways to provide background for the emergence of creativity in themselves and others.

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