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A study on the relationship between creativity and entrepreneurship with the trainees' gender

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ABSTRACT

The main purpose of this study is to examine the relationship between creativity and entrepreneurship among the male and female trainees' gender studying or trained from the free academies in Tehran province. The statistical population consists of 658 trainees of the mentioned academies, among which 483 trainees are male and 175 trainees are female. Using the Morgan table, the statistical sample size for men was 510 and for women it was 205. The method is correlation. The results indicate that there is a relationship between creativity and entrepreneurship among the "studying or trained male trainees" and studying or trained female trainees". Also there is not a significant relationship between the "studying or trained male and female trainees". In other words, the entrepreneurship scores among the trained and studying women were lower than the men with the same conditions.

Keywords: entrepreneurship, creativity, technical and vocational education.

1. Introduction

Technical and vocational education plays an important role in establishing the human capital through training the skilled force required by the markets at different countries. The education in developing countries, not only takes the responsibility of training the required workforce at different economic units, but also solves the unemployment problem by providing the self-employment. Institutes and higher education academies can be considered as the basis of development for many developing countries; these academies have a considerable share of the total employment. Also, these educations benefit from the returns in the short term and medium term, while the classic trainings have problems in terms of coordination with the job market needs due to the high costs, long training course, high contribution of theoretical trainings and also low benefit from workshop operations. For this reason, countries have paid attention to technical and vocational education so that these educations have influenced into the classic or formal education systems and follow an increasingly development. Entrepreneurship is the process of creating a new and valuable thing, considering enough time, effort, financial, physical and social risks to achieve the personal - financial satisfaction and independency. In other words, the entrepreneur is someone with new idea and thought that presents a new product or service to the market though identifying new opportunities and establishing a business. Amayli considers that creation has two criteria of novelty and relation. Thus, in order to foster more people in the process of entrepreneurship, planning for entrepreneurship capability becomes so important. In this regard, the entrepreneurship spirit should be revived through presenting continuous services of consulting and education. The literature of entrepreneurship texts shows that more than 30000 articles and books have been published on the start of entrepreneurship. Most of the educational programs and consulting units of entrepreneurship in different countries present their services to all entrepreneurs including men and women and a part of service receivers are female entrepreneurs. Entrepreneurship is the driving force of economic developments in countries. It is a method for creating new jobs and increasing the national wealth. Entrepreneurship subject in universities is discussed as a necessity in the third millennium and besides the technical and vocational colleges need to pay more attention to entrepreneurship subject due to missions, goals, structure and special processes. According to the mentioned issues and studies on entrepreneurship and technical and vocational educations, this study examines the relationship between the variables of creativity and entrepreneurship in free academies of Tehran province.

2. Literature Review

1.1.Creativity

Creativity is one of God's attributes that has granted to human being due to His endless grace. As our lives are a gift from God, our lifestyles are also a gift from us to God. In a simple definition, it can be said that the term creativity refers to the mental processes that lead to solutions, ideas, concepts, artistic states, theories or products that are unique. Four stages are defined for creativity: Preparation, incubation, inspiration and confirmation.

Lutaner (1992) considers creativity as the ability to see things in a new look and observing the problems that nobody could detect them and then providing the new and effective approaches.
In general, creativity is a process that has several stages as follows:
Preparation stage: Includes the precise attention focusing on the problem under study in order to solve it.
Incubation stage: Includes the time for thinking and reacting.
Persistence stage: Includes the insistent efforts required for increasing the activities, adding new information and defining the problem in order to create new and different results.
Insight stage: In this stage, the person finds an idea for which he/she has been looking but has ignored it already.
Verification stage: In this stage, the new idea is tested to ensure if it is proper.

1.2. Entrepreneurship

Entrepreneurship can be considered as a dynamic process that includes goals, development, transformation and creativity. This process needs the application of people motivation and power in order to create new ideas and also practical solutions. Joseph Schumpeter links the theory of economic development to the theory of economic development; in his opinion, entrepreneurship is most easy tool for economic development through innovation as a main element. In his opinion, entrepreneur is an innovator who makes a new combination and it can be the entrepreneurship or making a new product or even enhancing the quality of a product. Innovation is a new method for producing a new industrial product that establishes a new market, uses new sources and create a new organizational shape to the industry.

1.3.Entrepreneurial achievements

From this perspective, entrepreneurship brings two fundamental grips of achievements including a) applied and b) theoretical structures. In terms of applied achievements, the outstanding economists and those who are interested in this issue, define entrepreneurship based on its results and subject achievements. With a broader perspective and in terms of concepts related to applied achievements, issues such as value creation, wealth creation, entrepreneurship, creativity development, company or modern businesses creation, firm recreation, organizational growth, economic development and social-cultural development are considered as the fundamental achievements of entrepreneurship. According to socialists and especially according to ecology theory, entrepreneurship is the creation of organizational population or emergence of modern organizational modes and entrepreneurship dynamisms will lead to the creation of new organizational populations. From the theoretical perspective, the emergence of frameworks, patterns, theories and reliable typologies for explaining, predicting and interpreting the entrepreneurship activities at different analysis levels are considered as the theoretical achievements of this area.

1.4.Entrepreneur

According to Schumpeter, entrepreneur is an innovator and leader. Entrepreneur is someone who creates new combinations of the product or is like someone who wants to accept risks for organizing the economic and social mechanisms. He is even like someone who removes the

mismatch between supply and demand using the market opportunities or someone who has a business activity.

Entrepreneur is someone who has new ideas and introduces new products or services to the community through establishing a business and taking the risks. All types of features in an entrepreneur are:

- Need to succeed: It is the tendency to work in higher standards in order to succeed in competitive situations
- Internal locus of control: Entrepreneurs believe in themselves and do not attribute the success or failure to chance, destiny or similar forces and consider themselves as the main reason for their failure and success.
- Inclined to risk-taking: Although entrepreneurs are mainly considered as inclined to risk-taking, but the studies show that the entrepreneurs are not like that and act very carefully facing the risk and does his/her best in order to change the probabilities in his/her favor.
- Need for autonomy: Fry believes that the main feature of entrepreneurs is internal dominance and their autonomy. Internal dominance means that the person feels he/she is dominant on his/her destiny.
- Creativity: It is the ability to create new ideas and the ideas may lead to the new products or services. To define creativity, at first its position must be identified. Innovation is the presentation of product, process and new services to the market and creativity is a force that is hidden beyond the innovation. Innovation and creativity are the integral components of entrepreneurship. The presence of innovation and creativity is necessary to the extent that it can be said that: entrepreneurship cannot exist without them, as creativity is useless without innovation.
- Positive mental challenges: The difference between those who cannot achieve their goals and those who are successful is that the latter ones can be the supporters of the first group.
- The spirit of invincibility: The successful entrepreneurs believe that a man cannot fail till he is alive. The successful entrepreneurs can always gain a result, whether is positive or negative. They consider the result as an experience that has added to their understanding.

Some of the outstanding features of an entrepreneur according to Marison are as follows:

Commitment and determination, leadership, being opportunistic, fault and ambiguity tolerance, creativity, self-esteem and desire to excel

1.5.The relationship between creativity and entrepreneurship

Most organizations and companies have realized the importance of innovation and creativity. The role of creativity is such that the western countries refer to it as the term “death or creativity”.

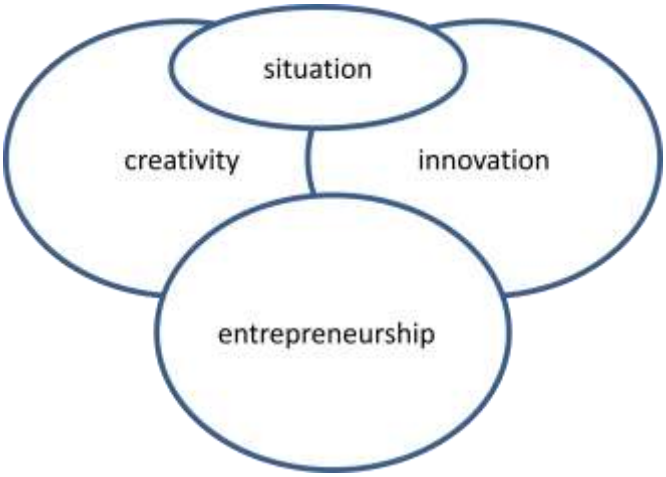

Figure 1: The relationship between creativity, innovation and entrepreneurship

As can be seen in figure 1, creativity and innovation, taking the risk, autonomy and orientation towards success are the integral components of entrepreneurship.

The previous studies in this field are as follows:

Pirkhayefi (1385) examines the phenomenon of "management creativity and entrepreneurship" with a psychological approach. He discusses the relationship between creativity and management and proposes its estimation in the form of a special discussion on creative management and entrepreneurship. Farid quotes Buchholz (1388) that the entrepreneurs do not have any choice except using the creative activities to achieve the sustainable competitive force for the organization. Interestingly, the organizations and those who are interested in creativity have more followed the ethics in business that has had a significant effect on customer satisfaction and organization growth. Kalantarian quotes Shekarkan (1390) that in a study entitled "The study of the simple and multiple relationships of achievement motivation and self-esteem with entrepreneurship" in the students of Shahid Chamran University in Ahwaz stated that the results of this study were consistent with the results of studies abroad. Afsari (1390) examines the "the role of technical and vocational academies in entrepreneurship development" and shows that the approach of technical and vocational students is based on the employment and public and private organizations and the approach based on the business entrepreneurship and self-employment has been welcomed less. The education fields have been mainly technical and vocational and the issue of entrepreneurship has not been considered much. Imani (1390) measures the features of village heads' entrepreneurship and the effects of technical and vocational skills and states that the combinational variables of education, technical and vocational skills, tendency to establish business have no effect on the degree of village heads' entrepreneurship. But the combination of the variable age of technical and vocational skills, and the age of establishing business has a significant relationship with the village heads' entrepreneurship. Nakhaee (1390) examines "the effect of information and communications on entrepreneurship creativity" and concludes that the training courses of information technology have an impact on the entrepreneurship creativity of students and increase their entrepreneurship creativity. Shekari (1390) explains the effect of variables of autonomy-seeking, internal control, advancement motivation and creativity in technical and vocational students, and states that the entrepreneurship in the field of autonomy-

seeking, internal control, advancement motivation and creativity has been higher than the average level. Shaver (1990) states that those who think they have the features of an entrepreneur show more creativity and advancement motivation. Rissal (1992) in his studies entitled "the study of the entrepreneurs' features in Indonesia" observed that innovation and creativity are the effective features of selecting entrepreneurship. Thurik (1999) showed that important features of creativity and autonomy are effective in increasing the economic activity level and reducing unemployment. Davidson (2005) conducted a study on Scotland students and concluded that training the entrepreneurship has an impact on increasing the students' skills in team working, self-esteem and communicational-managerial skills.

1.6. technical and vocational training

Technical training: It is a kind of formal education with the aim of preparing people for the required skills in productive skills that has a broader concept to the professional training in high schools and higher education.

Professional training: It is a kind of formal education with the aim of preparing people for job skills in industry, agriculture and business that is mainly taught in high school level.

Both educations deal with the people and preparing them for employment. The main roles of technical and vocational training include teaching the young men and women who will enter the market in the near future and also enhancing the quality of people who are working.

3. Methodology

The method of this study is descriptive and the two-variable correlation method is used because determining the coordination of changes in two variables (creativity and entrepreneurship) is considered.

1.7.Research instrument

Two questionnaires are used in this study in order to collect data:

1. Creativity randsyp questionnaire: The measurement is based on five-option Likert and has 50 questions.
2. Scarborough & Zimmerer entrepreneurship assessment questionnaire: It contains 10 questions.

1.8. Validity and reliability

In this study, SPSS software is used to analyze data and its reliability is done by determining the Cronbach's alpha coefficient. Since the above questionnaires have been used several times by researchers, thus their validity is confirmed.

Cronbach's alpha coefficient related to both questionnaires is shown in table 1.

Table 1: Cronbach's alpha coefficient related to both questionnaires

Cronbach's alpha coefficient	number of questions	Cronbach's alpha coefficient
0.913	50	creativity questionnaire
0.942	10	entrepreneurship questionnaire

4. Finding

The statistical population of this study includes the trainees of technical and vocational academies in Tehran province. The statistical population consists of 658 trainees of the mentioned academies, among which 483 trainees are male and 175 trainees are female. Using the Morgan table, the statistical sample size for men was 510 and for women it was 205. Table 2 shows the matter.

Table 2: The education status of male and female trainees

total	training	trained	education status
483	372	111	male trainees
175	96	79	female trainees
658	468	190	total

Thus, the statistical sample of the study has been selected from 18 disciplines in academies in Tehran province that are mentioned in table 3.

Table 3: The statistical sample based on the field of study

frequency	discipline	frequency	discipline	frequency	discipline
19	Industrial Drawing	28	Computer Aided Drawing	39	Repair of medical devices
18	Metallurgy	25	Building construction	31	Industrial Electronics
8	Hospitality	17	Financial Accounting	88	Electric cars
7	tourism	5	Administrative affairs	69	Desktop and mobile phone repair
113	MBA	39	marketing	21	Automotive Technical Service
18	Interior design	49	Industrial power	64	Drawing Buildings
183	**total**	**163**	**total**	**312**	**total**

According to the completed questionnaires in free academies of Tehran province, 15% of trained people were men and 24% were women with bachelor degree and higher. More explanations are given in Table 4.

Table 4: Te education status of trainees

result	bachelor and higher	associate	diploma	less than diploma	gender	
%100	%15	%17	%25	%43	man	education status
%100	%24	%28	%27	%21	woman	

In terms of military service, 73% of trainees in all technical and vocational academies have the military service degree, 12% are included and 15% are exempt. Table 5 shows the matter.

Table 5: Military service status of trainees

results	exempt	included	military service	gender	
%100	0.15	0.12	0.73	man	military service status

The results from questionnaires in this status show that 52% of trainees were employed in the study fields in 1392-1393 and 48% of them were unemployed when filling the questionnaires. The employment status of male and female trainees in free academies of Tehran province is shown in table 6.

Table 6: The employment status of trainees

results	unemployed	employed	gender	
%100	%48	%52	man	employment status
%100	%61	%39	woman	

The employment status of male and female trainees in technical and vocational academies of Tehran province their employment and unemployment percent are given in table 7.

Table 7: The employment status percentage based on the education level

results	employed	unemployed	gender	education
%100	%42	%58	man	**under diploma**
%100	%37	%63	woman	
%100	%59	%41	man	**diploma**
%100	%52	%48	woman	
%100	%69	%31	man	**associate**
%100	%57	%43	woman	
%100	%62	%38	man	**bachelor and higher**
%100	%69	%31	woman	
%100	%55.9	%44.1	total	**results**

Hypothesis: There is a significant relationship between male and female trainees who are studying or have been educated.

In order to examine the above hypothesis, the correlation test was used and its results are given in table 8.

Table 8: The relationship between creativity and entrepreneurship in trainees who are studying and educated ones

significance level	correlation coefficient	variables and indicators
0.069	0.181	trained people
0.081	0.159	training people

According to table 8, it can be stated that there is no significant relationship between creativity and entrepreneurship.

Table 9: The relationship between creativity and entrepreneurship in men and women who are studying and educated ones

significance level	correlation coefficient	variables and indicators
0.068	0.218	trained women
0.347	0.006	training women
0.000	0.668	trained men
0.000	0.618	training men

According to table 9, it can be stated that there is no significant relationship between creativity and entrepreneurship among the trained women. This is also observed in studying women. On the other hand, table 9 shows that there is a positive significant relationship between trained men and training men.

Using the ANOVA test, the average scores of men and women are compared. Table 10 shows this matter.

Table 10: The results of comparing the average scores of creativity and entrepreneurship in trained or training men and women

significance level	Degrees of freedom	F	variables and indicators
0.081	3	3.6743	trained or training men and women (creativity)
0.04	1	7.654	trained or training men and women (entrepreneurship)

According to table 10, it can be stated that there is no significant relationship between trained men and training men at 95% confidence level

According to table 10, part 2, it can be stated that there is a significant relationship between men and women.

Finally, Variance analysis and LSD method were used to examine the scores of entrepreneurship among trained and training men and women. Tables 11 and 12 show this matter.

Table 11: The results of comparing the average scores of entrepreneurship in trained or training men and women

significance level	Degrees of freedom	F	variables and indicators
0.023	3	3.856	trained or training men and women (creativity

Table 12: The results of comparing the average scores of entrepreneurship in trained or training men and women

significance level	mean difference	group 2	group 1
0.291	0.041	training women	**trained women**
0.034	0.133	training women	**training men**
0.021	0.135	trained women	
0.001	0.331	training women	**trained men**
0.001	0.236	trained women	
0.183	0.098	training men	

According to table 12, it can be stated that the score average of entrepreneurship in trained or training men is more than women and it can be concluded that there is no significant relationship between four groups.

5. Discussion & Conclusion

The study aims to explain the relationship between creativity and entrepreneurship among the male and female trainees and compare it with the educated people from academies. The results show that there is a relationship between creativity and entrepreneurship among the male trainees who are studying and have been educated. The study results of Solomon (1989), Shaver (1990), Rissal (1992), Schein (1994), Thurik (1999), Galvi (2005), Pirkhayefi (1385), Farid (1388), Nakhaee (1390) and Shekari (1390) show that there is a relationship between creativity and entrepreneurship and these findings are consistent with some parts of this study results based on the relationship between creativity and entrepreneurship among the male trainees who are studying and have been educated. But there are not any positive significant relationships between creativity and entrepreneurship in the total statistical population. In other words, the entrepreneurship scores among the women who are studying and have been educated have been lower than the scores of men. According to the above issues, it can be said that the technical and vocational educations could not improve the entrepreneurship spirit among women.

Most women are looking for job, but can find it less than the men. Since a little research has been done on the job-seeking of unemployed women, it is essential to examine their job-seeking behavior. Studies show that women choose part time jobs in order to spend more time in house with their families, thus they are not looking for full time jobs. On the other hand, it is difficult for them to find such a job with sufficient payment. Studies show that women face unemployment more than men in Eastern and central Europe. In fact, the development of economic activities of women is a social-cultural phenomenon hidden under the community layers. Thus, it is suggested:

- The realistic acceptation of differences between men and women, avoiding the unnecessary comparisons that reduce self-esteem.
- Entrepreneurship skills can be taught. Academies and job counselors can help trainees to enhance their creative spirit and overcome the unemployment by providing a proper field of services, motivation creation and training these skills.
- Trusting the talents and abilities of women, selecting rational programs for them.
- Allocating proper budget for fostering talents of all people in society including women.

- More participation of women in social activities and improving their perceptional, communicational and specialized skills

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