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THE STUDY OF EFFECTS OF ENTREPRENEURSHIP TRAINING ON OCCUPATIONAL INTERESTS AND ON FEMALE STUDENTS OF STATE AND PRIVATE SCHOOLS OF DISTRICT 6 TO CHOOSE THEIR FIELD OF STUDY

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ABSTRACT

The purpose of this study is to investigate the effects of entrepreneurship training on occupational interests and on female students studying in state and private schools of district 6 of Tehran to choose their field of study. The research method is quasi-experimental and the study population is 3820 female students, 120 of whom were evenly divided into two groups of control and testing. In order to teach entrepreneurship, we used the KAB package of entrepreneurship and to gather data, we used the Holland occupational interest questionnaire with reliability of ($\alpha = .92$) and to choose a field of study we used the disciplines approved by the ministry of education. The data used in this research, analyzed according to descriptive statistic, and its statistical mean, standard deviation, frequency and percentage were calculated. Moreover, according to inferential statistic, we used the Kolmogorov-Smirnov test, F Levin statistical test, Friedman test, and covariance analysis. According to the main hypothesis of this research, it is showed that entrepreneurship training has affected occupational-educational interest with ($f=31.87$) and significance level of (0.000) and has affected the decision on choosing a field of study with ($f=30.82$) and significance level of 0.000). Studying the ranking of occupational-educational interests of students showed that they were interested in the following fields before being taught entrepreneurship: Creative/Artistic occupations (5.09), Organizing/Conventional, occupations (5.07), and rescuer (4.79). After being taught entrepreneurship, they showed interests in the following fields: Creative/Artistic occupations (4.79), Persuasive/ Impetus (3.86), realistic/hardworking (3.71). Analyzing the frequency of students' tendency towards fields of study before and after being taught entrepreneurship showed that students had become interested in technical and professional disciplines.

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Introduction

Due to the rapid progress of knowledge and technology in our era, the issue of recognizing and choosing a field of study and occupation is getting more and more complicated every day. In addition, unless we proceed with a good plan, we may end up with more time and effort spent to reach our goals, or we might make mistakes, which deviate us from our goal, and eventually we may never reach our goal [1]. However, the problem in schools begins when students have little information about their future occupations, in order to choose their field of study, and define their career path with inadequate information. Part of these choices and decisions do not reflect social demands and expectations or logical decision-making, it rather takes the family's desires into consideration, which may be rooted in different issues and will not be able to guide students correctly, or these impulsive and improvidence decisions made by students might have irrecoverable consequences on their life. Moreover, there is no serious, purposeful, and programmed activity in this area in schools, and students are unconsciously choosing a discipline and defining their career path. Besides, nowadays careers are very various and different and each one of them is

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required in society with different degree of demand and it is crucial that path of choosing a field of study and occupational interests is guided by educational counselor and instructors in a scientific and technical manner. Thus, the challenge of field of study and occupational interests of students have turned into a critical challenge, which have imposed consequences on the society.

Education and occupation are two most important aspects of human life. We spend most of the best years of our lives to gain the knowledge and get ready for a job. In order to get the best out of life and meet our wishes, we have to make a plan. [1]. One of the most important aspects of planning for our lives is choosing a field of study and occupational interests. Choosing a field of study is one of the important issues in the educational programs, and is a very influential aspect of social, economic, political and cultural affairs and provides specialized and skilled human resources. It is required to be done in the most accurate and well-advised manner [2].

On the other hand, progress in everything depends on talent and interest, and although there is a positive correlation between these two variables, if someone is better in one of these variables it does not mean that necessarily they will be better in the other variable. A certain person may be talented enough in one of the educational-occupational fields without having any interest in that field or vice versa, the person may not be capable and qualified for a job that is actually interested in. Therefore, if both talent and interest are aligned with each other, the performance and efficacy of the individual can be better managed and predicted [3]. Therefore, considering both the occupational interests and the choice of field of study simultaneously will also contribute to the better performance of students in the future occupations they will undertake.

Studying and recognizing the occupational tendencies and interests of students is an attempt to improve their job status in the future. Because choosing suitable jobs will impact on job productivity, job satisfaction, initiative and creativity, reasonable use of abilities and talents, success rate of an individual in their Life and the rate of satisfaction of an individual's needs through their career life. Studying the occupational tendencies of students can have positive and direct results in their lives. However, any guidance and directing of students regarding education and occupation to choose a suitable job and achieving it, requires a recognition of their desires and tendencies [4].

The purpose of interventions and giving job tips is to help students find their passion, so that it gives them the opportunity to explore special occupational areas [5]. According to super's theory (1980), discovery means measuring abilities, interests, skills, and examining social opportunities. It reaches its peak especially when linked to the individual's professional future [6, 7]. In the current era, education is the key to enter into many occupations, and educational guidance can play an effective role in the planning of career life because students think about their future job opportunities by choosing their field of interest [8]. Education and occupation are two important aspects of human life. We spend most of the best years of our lives to gain the knowledge and get ready for a job. In order to get the best out of life and meet our wishes, we have to make a plan. In our era, the issue of recognizing and choosing a field of study and occupation is becoming more complex everyday due to the rapid advancement of knowledge and technology. Therefore, unless we proceed with a good plan, we may end up with more time and effort spent to reach our goals, or we might make mistakes, which deviate us from our goal, and eventually we may never reach our goal [1].

Many projects have been carried out in the ministry of education. One of these projects was the need for a guideline program to familiarize students with future career and career opportunities and to assist them in choosing an appropriate field. This task was appointed to school counselors and they, given the student's academic performance, students' interests, and their education background would guide students in choosing an appropriate field of study [9].

Holland categorized human willingness into six job categories, which are consistent with the 6 personality traits of humans. In this test, it is tried to find the dominancy of one category toward the other five. This test consists a questionnaire constituted by sections regarding activities, experience, ideas about favorite jobs, jobs, self-assessment and career advisor [10].

Realistic types are interested in working with vehicles and not interested in educational and health-care activities. In terms of personality traits, they are mainly practical, self-centered, thrifty, stubborn, deterministic, and anti-social. Appropriate professions for this group are technical jobs, agriculture and some service jobs.

The problem solver or explorer type is interested in research and scientific work in the fields of mathematics, physics, chemistry, biology, and not interested in aggressive activities. In terms of personality traits, they are mainly curious, rigorous, analytical, complex, aloof, critic, reserved. Appropriate professions for this group are scientific and research, medical and some engineering professions.

The next type is the encouraging or aggressive type. They are interested in leadership, management, politics, and economics. In addition, they do not like professions such as research. In terms of personality traits, they are mainly curious, energetic, confident, thrill-seeker, and aggressive. Therefore, they are appropriate for professions like management, trade and the selling. Risk taking and aggression is one of the six main areas, according to RIASEC model developed by Holland (1985). According to Holland (1958), the last type due to the entrepreneurial competence is accompanied by a preference for setting up a business. This type grows in work environment, which encourages competition, excellence, confidence, leadership, ability to speak, controlling others, intuition in management, sales and trade-related matters in a person.

Choosing a field of study is another variable considered in this research. Certainly, as the proportion of people who willingly and consciously choose a field of study increases, the desire to learn will also increase and eventually graduates will enter society with more capabilities and skills. The discipline selection process could be affected due to the factors of time and place,

its quality could be variable in terms of searching methods for information about the courses, and the amount of information gathered as well [6]

According to Kinzie et al (2004), researchers have been studying factors affecting the decision on choosing a field of study for about fifty years. In addition, during this period, researchers have come up with some individual, social, and occupational characteristics.

Entrepreneur is a French word, which means accepting the responsibility to perform a task. In another word, a person who accepts the risk to establish and organize a business is called an entrepreneur [11].

In fact, in 1475 in French, a person who accepted the responsibility to undertake a task would be called an entrepreneur. Later, in medieval, a person who was responsible for projects of mass production would be called an entrepreneur. Richard Cantillon (1725) differentiated between a person who undertook trade risks and the one who financed a business. Jean-Baptiste Say (1803) distinguished the profits derived because of the existence of an entrepreneur from the profits of capital. Joseph Schumpeter (1934) described an entrepreneur as an innovator that creates new untried technologies. David Mc Clelland (1961) introduced an entrepreneur as a moderate risk taker with needs for higher success. Peter Drucker (1964) viewed an entrepreneur as a person who takes the most advantages from opportunities. Henry Mintzberg (1975) considered the role of an entrepreneur as one of the roles of high-level decision makers in organizations. According to Albert Shaper (1975), an entrepreneur is a pioneer who organizes social and economic activities and accept the risk of failure. Karl Vesper (1980) believed that an entrepreneur is a person who is defined differently according to economists, psychologists, businessmen and politicians. Gilford Pinchat (1983) believed that an entrepreneur exists within the pre-established organization [12]. From the beginning of 1980, the studying of entrepreneurship training using different methods, which were believed to be appropriate, began Kasarda, (1992: 5). Obviously, one of the major tools of entrepreneurship development and hence job creation, is entrepreneurship training [13]. Rashid says that the results of the study of researchers showed that educational interventions have a direct impact on enhancing specific aspects of entrepreneurial attitude as well. In addition, previous studies on this subject showed that entrepreneurship training could change attitudes towards entrepreneurship [14,15] confirmed the theory of the role of social learning in entrepreneurship training. They realized that entrepreneurship could be taught using the principles of social learning theory. In addition, they found that the trainings have impacts on entrepreneurial attitude. [16] have showed that entrepreneurship training is effective on a certain attitude toward entrepreneurship and these trainings reinforce the desire in students to become an entrepreneur. [14]also stated that attitudes are the best predictors of entrepreneurial tendencies.

Hypothesis:

- Entrepreneurship training is effective on the students' educational career interests.
- Entrepreneurship training changes the students' job-learning priorities.
- Entrepreneurship training has an impact on the choice of student's regarding their field of study.
- Entrepreneurship training changes the priorities of students for choosing a field of study.

Methodology:

A- Entrepreneurship Training Package: To teach entrepreneurship, the KAB Entrepreneurship Training Package was used. This package is a comprehensive course of entrepreneurship training designed specifically for skilled learners and technical and vocational graduates and other graduates of the education system who are familiar with a technology or skills. In this package, ten entrepreneurship-training sessions are presented.

B- Holland Career-Education Interest Questionnaire: Holland Questionnaire has been repeatedly investigated in domestic researches, specially in 1980 by Shafiabadi. Moreover, since 1992 up to the present, Hosseinian, S. and Yazdi, S.M. have used it repeatedly in their researches. Additionally, Taqizadeh (1999) has once used it in his research as well. In this study, we refer to the "tendency" part of this questionnaire in order to investigate the students' interests regarding occupation and education.

C- The question of choosing a field of study: This question has been formulated to examine the person's desire to choose a field of study from empirical science, mathematics, human science, technical, and vocational courses.

Research Tools:

This research is practical in terms of purpose. Because, in addition to identifying phenomena and the relations between variables, it tries to improve and upgrade tools, methods and processes. Hence, regarding the classification of researches in terms of purpose, it is a practical research.

In terms of methodology, it is a quasi-experimental study with two groups of control and testing. Because in this study, we were looking for the impact of teaching entrepreneurship on the students' creativity.

The population of the study includes 3820 female high school students of district 6 in Tehran. The sample of this study constitutes 120 students extracted from the population, divided into two groups of control, and testing.

Findings:

Before addressing the main question of our research, two important assumptions of analysis of covariance namely, the normal distribution of variables and the homogeneity of variances were examined. Kolmogorov-Smirnov test with the amount of

1.62 and significance level of 0.126 for the pre-test and the amount of 2.14 and significance level of 0.104 for the post-test revealed that the variable of career-educational interests follows the normal distribution.

Table 1. Kolmogorov-Smirnov test - career interests variable

	Pre-test	Post-test
Number	120	120
Average	5.38	4.96
Standard Deviation	0.998	0.75
Kolmogorov-Smirnov Test	1.62	2.14
Significance Level	0.126	0.104

Kolmogorov-Smirnov test with the amount of 2.78 and significance level of 0.08 for the pre-test and the amount of 2.55 and significance level of 0.093 for the post-test revealed that the variable of choosing a field of study follows the normal distribution.

Table 2. Kolmogorov - Smirnov – Choosing a field of study

	Pre-test	Post-test
Number	120	120
Average	2.33	3.14
Standard Deviation	0.917	1.82
Kolmogorov-Smirnov Test	2.78	2.55
Significance Level	0.08	0.093

Investigating the first hypothesis regarding the impact of entrepreneurship training on career-educational interests of students with the amount of $F=31.87$ and significance level of 0.000 showed that entrepreneurship training affects career-educational interests of students.

Table 3. Analysis of covariance regarding the entrepreneurship training as an independent variable, occupational interests as a dependent variable, and the pre-test auxiliary variable

Sources of changes	SS III	df	MS	F	sig
Modified Model	39.47	2	19.73	29.192	0.000
pre-test	18.36	1	18.36	27.15	0.000
Entrepreneurship training	21.55	1	21.55	31.87	0.000
Error	79.10	117	0.676		
Total	360.38	120			
The coefficient of determination (0.33) adjusted coefficient of determination (0.32)					

Analyzing the second hypothesis of our research and ranking the career-educational interests of students prior and after the education showed that students were interested in the following fields before the education: Creative/Artistic occupations (5.09), Organizing/Conventional, occupations (5.07), and rescuer (4.79). Moreover, after being taught entrepreneurship, they showed interests in the following fields: Creative/Artistic occupations (4.79), Persuasive/ Impetus (3.86), realistic/hardworking (3.71).

Table 4. Friedman's test according to career-educational interests before and after training.

Career-Educational Interests	Before training (Avg)	After training (Avg)
Realist / Hardworking	2.03	3.71
Problem Solver / Explorer	1.52	3.30
Encouraging / Impetus	2.52	3.86
Rescuer / Social	4.79	3.17
Creative / Artistic	5.09	4.12
Organizing / standard	5.07	3.13

Analyzing the third hypothesis of our research regarding the impact of entrepreneurship training on the decision of students to choose a field of study, with the amount of $F=31.87$ and significance level of 0.000 showed that entrepreneurship training affects students decision.

Table 5. Analysis of covariance regarding the entrepreneurship training as an independent variable, choosing a field of study as a dependent variable, and the pre-test auxiliary variable

Sources of changes	SS III	df	MS	F	sig
Modified model	39.47	2	19.73	29.192	0.000
pre-test	18.36	1	18.36	27.15	0.000
Entrepreneurship training	21.55	1	21.55	31.87	0.000
Error	79.10	117	0.676		
Total	360.38	120			
The coefficient of determination (0.33) adjusted coefficient of determination (0.32)					

Studying the frequency of students' tendency regarding a field of study before and after training showed that students have shown interests for technical, professional, work, and knowledge to fields of study.

Table 6. Study the tendency of students regarding a field of study before and after training.

Majors	Before training (Frequency and percentage)	After training (Frequency and percentage)
Mathematical Science	27 (22.5 %)	20 (16.7 %)
Empirical Science	33 (27.5 %)	26 (21.7 %)
Human Science	49 (8/40 %)	37 (30.8 %)
Technical and professional	9 (5.7 %)	14 (11.7 percent)
Work and Knowledge	0	12 (10%)

Discussion and Conclusion

The purpose of this study was to investigate the effects of entrepreneurship training on occupational interests and on female students studying in state and private schools of district 6 of Tehran to choose their field of study. The importance of this research also has been emphasized in [17], Feizy et al. (2012), [8], Mostafi-Pour (1998), Hakim-Ara (1995) and Hashemi (1995).

Entrepreneurship training has affected educational-occupational interests of students. According to the findings of this study, after teaching entrepreneurship, the interests of students regarding persuasive occupations that require a person with adventurous, energetic, confident and thrill-seeker personality traits, and occupations including management, business and salesmanship increased. The students also showed interest toward occupations that require a person with realistic and hardworking personality traits such as agriculture and technical occupations. Furthermore, they have also shown interest in some service providing jobs that require a person with hardworking, self-oriented, economical, tough, and determined personality traits the third group that their tendency's rank changed after training was those with problem solving and exploring personality traits. The main personality traits of this group are curiosity, accuracy, analytic, complexity, and criticism. Additionally, occupations such as scientific-researching and some engineering professions will suit them. Generally, it can be said that, entrepreneurship triaging can increase the students' tendency toward technical and practical jobs that require them to think and act simultaneously. As Holland (1962) explained, each one of these personality types has its own kind of dreaming about their future career. This study showed that entrepreneurship training also has effects on students' decision to choose their field of study. The Students who received entrepreneurship training showed more tendency for technical and vocational fields of study in comparison to students who had not received the education. Entrepreneurship is the promotion of a pragmatism spirit that encourages people to initiate and pursue new businesses. In addition, the fields of study whose practical and applicable parts are more extensive than the theoretical part are of greater interest in entrepreneurial behaviors. Based on these results, the following suggestions are presented:

- Entrepreneurship training has effected student's educational-occupational interests, and essentially entrepreneurship training, is training how to start and pursue new and original businesses, and emphasizes on practical aspects of a business. Therefore, entrepreneurship training can be employed as a motive to encourage students to

consider practical and action-based occupations instead of theoretical jobs such as technical, conventional, and mathematical fields of study.

- Due to the connectivity and similarity of entrepreneurship with practical environments, it is suggested that entrepreneurship to be taught and pursued more seriously in technical and vocational and experimental schools. Therefore, students can benefit from this favorable environment appropriately and strengthen their entrepreneurial spirit and abilities.

- The effect of entrepreneurship training on choosing a field of study is also indicative of the same explanation for educational-occupational interests. In other words, teaching entrepreneurship will help students to grow fond of fields of study with more substantial scientific nature, and if policies of educational system is set to promote these fields of study, teaching of entrepreneurship is appropriate for this purpose.

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