Investigating the effectiveness of entrepreneurial skills training on the students' self-efficacy beliefs

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Abstract: The purpose of this research is to examine the effect of entrepreneurship skills on Allameh Tabatabaei students' self efficacy skills. The applied tool in this research is the general self efficacy scale (GSE) which is developed by Sherer et al (1982). Its reliability is examined by the split half method and also its validity is reported by the construct validity. The research population included all Allameh Tabatabaei job-seeking students in Faculty of Psychology and Educational Sciences (2008-2009) and they accepted the invitation to attend the entrepreneurial skills training. Fist, all Psychology and Educational Sciences students were invited to participate in an entrepreneurship skill course. 42 students registered for the mentioned course and 34 ones were chosen randomly. Then, they were classified into two groups: experimental and control groups. After sampling, the members in two groups responded to the mentioned questionnaire. Then the control group was put in the waiting list and the experimental group attended in 2-hour 10 sessions of entrepreneurship skills training course. After performing the training program, a post-test was taken from all the members of both control and experimental groups, and the data was analyzed by the covariance analysis test. The result of research indicates that this training method has been effective in enhancing the students' general self efficacy beliefs.

Introduction

In recent decades, the globalization, rapid changes in various scientific fields, growth and increasing development of social-economic systems, struggling to gain the competitive advantages in the market of goods and service, the need to reduce the reliance on the natural and land resources, and on the other hand, increased unemployment rate and low employment level have convinced the policy makers in the business world that the innovative approach and creative problem solving are the best ways to overcome these challenges and this is reflected properly in the concept "Entrepreneurship-based development".

The opportunity should be seized in today world which is the era of speed, communication creativity and innovation and now in the world the creative, innovative, enterprising and opportunistic individuals as the entrepreneurs have become the source of major developments in the field of manufacturing and service fields and they are called as the "national champions".

Entrepreneur is the individual who creates a new business along with the risk and uncertainty with the aim to achieve the profit and growth in order to identify the significant opportunities and integrate the necessary sources for their utilization (Zimmerer et al, 2005). Entrepreneurship is a way to think, reason and act based on the opportunity-orientation with the holistic approach and balanced leadership (Timmons et al, 2004).

According to the conducted research, the entrepreneurship is a dynamic and continuous process. It is true that the people are born with the innate features and characteristics, but the individuals are not born the entrepreneurs and they become the entrepreneurs through the experience and training during their lives. Entrepreneurs are usually classified into two categories: Those who become the entrepreneurs as a result of the experience and growth in an appropriate work environment and those who pass the entrepreneurial process with the necessary training of entrepreneurial process. In this regard, the individuals, who have experience as well as being trained, lead the most lucrative business.

Training before the academic education is indirect and is usually done when the individual is in the creative environments. However, the individuals can achieve the knowledge and skill required to start and development a new business through the entrepreneurship education during the skill training.

Entrepreneurship is known as a key factor in the economic development of countries. By developing the educational programs about the entrepreneurship, most of the countries have achieved the notable successes in the field of economics. Entrepreneurship education creates the motivation in the individuals for the success and practical steps for starting a business in addition to creation and
promotion of entrepreneurship culture. This major and decisive factor plays the role in producing the wealth and developing the technology and employment (Kia, 2007).

Nowadays, the young individuals and graduates' employment and reducing their unemployment rate are the authorities' major concerns in our country. In fact, developing and preparing those, who want to stand on their own feet, is possible through making them familiar with the entrepreneurial knowledge and skills by the education. This is also in line with the objectives of sustainable national development and the five-year economic, social and cultural development plan as well as the twenty-year perspective of country. Training the entrepreneurial skills can help to increase the rate of individuals' employment, development, productivity, and efficacy and reduce their unemployment rate.

On the other hand, starting the small businesses and attracting the entrepreneurs are very effective in the rate of domestic production and can prevent to import some of goods to the country in addition to created significant effect on the currency savings (Cook, 1938; Translated by Teymouri, 2007).

According to the studies by Alavi (2003), the first researcher who seriously collected and processed the information about the entrepreneurship, Paulin investigated 81 published articles and book up to the year 1982 and revealed four trends in the entrepreneurship research (Yaraei, 2004). The first trend includes the psychological and sociological characteristics of entrepreneurs' character and behavior. The second trend includes the entrepreneurial processes about the new companies and third trend includes the classification of relationship between the entrepreneurship and the society. He has dedicated the last part of his study to the education process and the government role in entrepreneurship (quoted by Yaraei, 2004).

Aldrich (1989) studied about 322 entrepreneurship articles which were published during 1981 to 1990. He conducted his studies in three dimensions of research methodology, field study and research and technology project. Results of investigations in 1990 have provided a new idea in the field of entrepreneurship; and according to the most of the researchers' viewpoint, the entrepreneurship is the driving engine of social changes and it leads to the productive employment, utilizing the human resources, and ultimately the national life revival. Moreover, the studies have been conducted in the field of entrepreneurship capabilities. Various studies have examined the relationship between these capabilities with the entrepreneurship; we will mention some of them here: The entrepreneurship has always been associated with the creativity and innovation. So that Drucker (1985) believes that the creativity and innovation are correlative as it could be argued that the entrepreneurship has no result without the innovation and creativity. Results of some of his study indicate that the entrepreneurs select the new jobs or establish the companies not only due to the economic reasons, but also because of the creativity and innovation in the business. By the study of 150 entrepreneurs Solomon (1989) came to the conclusion that the entrepreneurs had first the motivation to create something new, different and innovative and the economic benefit was not the entrepreneurs' primary stimulus and motivation (Quoted by Yaraei, 2004). In this regard, Schein (1994) also came to the conclusion based on the conducted research that the real entrepreneurs start the new jobs mostly due to the innovation and creativity reasons rather than the economic incentives. In another research by Shaver et al (1990), it is observed that those, who think they have an entrepreneur's characteristics, show more innovation and creativity (Quoted by Badri, 2005). Furthermore, Rissal (1992) concluded in a research that the innovation and creativity are among the effective characteristics in doing the entrepreneurial activities. Other research has also been conducted in the field of relationship between the locus of control and the individuals' entrepreneurship, so that the entrepreneurs have been described as those with the internal locus of control. For instance: Arshid (1967) concluded in a research that the successful entrepreneurs have the internal locus of control. In other words, they attribute their own success to the internal factors such as the individual effort or ability (Quoted by Badri, 2005). Ahmed (1995) also indicated in a research that the entrepreneurs with the internal locus of control are willing to take risks and have the achievement motivation.

Another study, entitled as "Investigating the current state of entrepreneurship education on the Argentinean students' entrepreneurship; the sample of this research contained 430 participants in entrepreneurship training courses. The interview was the data collection tool. The result of this study indicates that the students offered the courses for entrepreneurship training in order of preference including: The introduction for entrepreneurship and business, creativity and innovation, social entrepreneurship, finance and investment, developing the business plan and management of business units.

Howard (2004) conducted a research entitled as "The effect of developing the entrepreneurial capabilities (independence, risk taking, achievement motivation, self-control, confidence and creativity) on
450 students' entrepreneurship. The results of his research indicate that there is a direct relationship between the individuals' entrepreneurial potential and capabilities.

Despite the fact that the subject of entrepreneurship started in the world since 1913, this topic is new in our country and more attention has been attracted to this subject in recent years and several studies have been or being conducted in this regard. Investigations have been done in the field of research which is the effect of entrepreneurship skills training on the students' self-efficacy, but it seems that no research has been conducted in this regard in our country. It should be mentioned that most of the entrepreneurial studies are conducted in the field of economics and management and they are limited in the fields of psychology and education; in some of the limited cases are described as follows:

In Boroumand-nasab's research (2002), entitled as "Investigating the simple and multiple relationship of social and economic status, achievement motivation, risk taking, creativity and self regard with the students' entrepreneurship at Shahid Chamran University of Ahvaz", some of the entrepreneurial competencies have been studied on the students. The prototype of this research, consisting of 400 male and female students at Shahid Chamran University of Ahvaz, and a sample of 200 students were applied in order to determine the reliability and validity of tests. The data collection tool in this study consisted measurement questionnaire of Entrepreneurship characteristics, entrepreneurship orientation test, creativity test, risk taking, Locus of Control Scale, Self-Esteem Scale test, and socio-economic status questionnaire.

The research results are as follows:

1. The correlation coefficient among the achievement motivation, creativity, self-esteem, and locus of control is significant for all subjects at the target levels and the multiple correlation of creativity, self-esteem and achievement motivation has been the best predictor of entrepreneurship for male and female subjects.

2. The correlation coefficient between the achievement motivation, creativity, self-esteem, locus of control and the entrepreneurship is significant at P<0.001 by using different entrepreneurship tools for all male and female subjects and their relevant hypotheses are confirmed.

Another study entitled as the "Society, culture and entrepreneurship" is conducted by Ahmadpoor Dariani and Malekpour (2002) with the aim to investigate the effect of social and cultural variables and identify the features of general culture of Iran and its consistency with the individual and social features and characteristics relevant to the entrepreneurial activities as well as the barriers to entrepreneurial development in Iran (Badri, 2005).

Each person has the judgment about his own ability to accomplish his actual goals and this is called the self-efficacy which is first introduced by Albert Bandura in addition to its measurement in 1980. The individuals' judgment about their own abilities to accomplish the designed goals of performance is called the self-efficacy (Bandura, 1996/ Pajares, F., 1997).

Bandura emphasizes on the individual's perception on self-efficacy as the Cognitive Mediator. The individual judge about his own potential during implementing an action and this judgment on the potential influences the thought, excitement, affection, and behavior. Perceived self-efficacy is not related to the number of individual's skills, but it is relevant to what the person believes that he can do under certain circumstances (Bandura, 1993).

According to Bandura's belief (1997), the self-efficacy perceptions affect choosing the activity, perseverance at work, the level of made effort, and probably the level of achieved success (Carcia, J.n & De Caso, A.M., 2006; and Romano, 1996).

While doing an action, the self-efficacy determines the amount of made effort and the perseverance. Those, who are sure of themselves, are more likely to predict the failure scenarios; in other words, they are worried about the possibility of lack of performance and leave their effort unfinished. Thus the individuals illustrate the success scenarios with the sense of optimistic self-efficacy which guide their operation and let them persevere while encountering the barriers (Schwarzer, 1997).

According to the conducted research, it seems that the individual's self-efficacy varies as the result of gender and age. Research on the children and adults suggests that the men have higher self efficacy than the women on average. This gender difference reaches a peak in about the age of twenty and is reduced in the following years. The self efficacy is increased in both genders during the childhood and early adulthood, reaches a peak in middle age, and is decreased after the age of sixty. Self-efficacy affects the educational and personal performance. The research indicates a significant and positive relationship between the self-efficacy and educational performance (Schultz and Schultz, 1998; translated by Seyed Mohammadi, 2000).

Since the self-efficacy has indicated that it can affect the persistence and overcoming the obstacles (Bandura, 1986), it can be an important cause of performance for the complex interpersonal tasks (Gist et al, 1991).
If the self-efficacy is called a trait about the people, the self-efficacy association with all sorts of concepts and properties are investigated and the results obtained from the fields of industry, education, and management. In general, the individuals with high self-efficacy have high efficacy in their careers.

- Gist (1989) investigated the effect of training method on the idea generation among the managers and studied the effect of two training methods on the self-efficacy and performance during the training in order to solve the innovative issue. Cognitive modeling was one of those and the other was the method with the lecture and practice. Subjects acted significantly in cognitive modeling training towards conditions of lecture in qualitative and idea generation difference. In this research, the training methods had significant priority based on the cognitive modeling. Furthermore, the self-efficacy has a positive correlation with the performance. Findings indicate that the self-efficacy can act as an intervening variable between training and task performance.

- Gist, Stevens and Bavetta (1991) investigated the effect of self-efficacy and post-training interventions on the Acquisition and Maintenance of complex interpersonal skills. This study has two objectives: First, investigating the effect of student's self-efficacy on the acquisition and maintenance of complex interpersonal skills and then exploring the interaction between the self-efficacy and post-training method for maintaining the behavioral skills. Results indicate that the primary self-efficacy significantly related to the initial level of performance as well as maintaining the skill during a seven-week course. The effects of primary self-efficacy on the skill maintenance remain after controlling the initial performance. Moreover, the results indicate that the effect of self-efficacy on the skill maintenance can be moderated by the post-training intervention. Moreover, the results show that the classification training of objective intensifies the differences between the trainers' high and low self-efficacy; furthermore, the performance difference between these two training groups is relatively low in this study. According to the implicit effects of these findings, this possible approach to training design can maximize the maintenance of complex interpersonal skills and leads to the greatest return on training investment.

- Early (1994) investigated the cultural effects of training on the self efficacy and performance. This study investigates the empirical and theoretical relations of training and individualism-collectivism towards the managers' self-efficacy and performance in Hong Kong, the People's Republic of China, and the United States. This study indicates that the self-efficacy training differently forms the individual's function which depends on the relationship between the training method and the orientation of his individualism-collectivism. People with high group and individual collectivism respond better to the group-based training information, while those with low group and individual collectivism respond better to the individual-based training information. Meanwhile, training information, which was consistent with the group and individual collectivism, was more effective in performance development than a case without training.

- Romi et al (1995) studied the Participant and Symbolic Modeling Training Programs in order to their effects on the Changes in self-efficacy in young advisers. Results indicated that the subjects' self-efficacy in participant modeling group was significantly increased compared with the subjects' self-efficacy in symbolic modeling group or Contrast Group. Both training methods affect the self-efficacy positively compared with the Contrast Group.

- Soresi, Nota and Lent (2004) investigated the relation of self-efficacy with the type and amount of training in a sample of career consultants in Italy. Findings suggest that the amount of professional consultation training has positively related to the consultants' self-efficacy in the field of their abilities to visualize the career issues, resolving the address career indecision concerns, and providing the training consultation. Meanwhile, the consultants, who passed the in-service training courses, which emphasized on the social cognitive learning theories, had much stronger self-efficacy in their skills for visualizing the career issue and training consultation.

Given the profound and undeniable effect of self-efficacy on the behavior and performance and considering that the rapid changes of today world and the information era require the efficient individuals, which have the ability to process interpersonally and creative thinking, the training authorities especially the consultants should pay serious attention to apply the strategies for enhancing the students' self-efficacy in order to improve their future career.

Furthermore, the lack or shortage of entrepreneurs, who have the scientific, religious and technical knowledge as well as the entrepreneurship skill and art and can be responsible for the
management of cultural, social, industrial, manufacturing and service projects by creating a new business and providing a plan, is one of the issues which the technical, academic and management centers are faced with and create numerous problems.

According to the conducted investigations, it can be stated certainly that to have the entrepreneurship art and skill is an important factor in the individual self-efficacy and training the components of this variable can be essential for the trainers and practitioners including the teachers, professional counselors, professional training officials, managers and entrepreneurs in governmental and non-governmental jobs and all those who are connected with the individuals' career life in the country. On the other hand, given that few studies have been conducted in this regard in Iran, working in this way can provide useful and important information for the mentioned centers. Moreover, since that most important effective factors in the entrepreneurial movement are done from the potentiality to actuality and the appearance of the entrepreneurial spirit in individuals is done through the experience, training, and supporting them and the training courses enable the people to find the employment opportunities, collect and assess the necessary resources, and plan the appropriate plan for success in order to utilize the obtained opportunities and also given that several investigators have indicated with the reliable evidence that any individual's belief of self-efficacy can affect his own career interests, decisions, and success and at the same time they can be also affected by the it, the researcher is seeking to respond to this question whether training the entrepreneurship skills can affect the university students' self-efficacy or not?

Methodology

**Subjects and Sampling method:** Statistical population includes all "job-seeking students" in the Faculty of Psychology and Educational Sciences at Allameh Tabatabai University of Tehran during 2008-2009 and they have responded positively to the recall of registering in the course of entrepreneurial skills training.

First, all university students are invited to a training program and then 34 students, who have responded to this recall positively, are randomly selected and replaced in two experimental and control groups. First, the pre-test is taken from both experimental and control groups and no experiment is done for the control group. After finishing the experimental procedure for the experimental group, the post-test is taken from both groups and then the differences between the scores of post and pre-tests in both groups are compared with each other and determined with the effect of experimental procedure.

**Entrepreneurial Skills Training Program**

If we want to have the dynamic, efficient and updated training, it is necessary to enter in training stage with the new thought of tools and methods. Training Package is a new tool which is designed, produced and developed in line with this requirement. Training Package facilities the training program.

According to this "Entrepreneurship training package", the entrepreneurial skill training course is held for the students step by step in ten 120-minute sessions entitled as "Seven Steps to Entrepreneurship" during two days per week:

- **First step:** Preparation and conscious decision to enter the business world. Required time for training: A 120-minute session (first session).
- **Second step:** Entrepreneurship. Required time for training: Two 120-minute sessions (second and third sessions).
- **Third step:** Innovation and idea generation. Required time for training: Two 120-minute sessions (fourth and fifth sessions).
- **Fourth step:** Identification and evaluation of the entrepreneurship opportunities. Required time for training: Two 120-minute sessions (sixth and seventh sessions).
- **Fifth step:** Business plan and Financing resources. Required time for training: A 120-minute session (eighth session).
- **Sixth step:** Establishment and running the business. Required time for training: A 120-minute session (Ninth Session).
- **Seventh step:** Establishment and management of business. Required time for training: A 120-minute session (Tenth Session).

It should be explained that the pre-test is taken for both experimental and control groups in a session before starting the training, also the post-test is taken for the experimental group in the last training session and is done for the control group separately at the same day; moreover, the post-test is taken from the experimental group four weeks after the end of course.

**Measurement tool**

**Self-efficacy questionnaire by Sherer et al:**

In this study, the self-efficacy questionnaire by Sherer et al (1982) has been applied in order to measure the university students' general self-efficacy because this test measures the general self-efficacy, has no particular conditions to run, has no limitations for being implemented at different ages, is among the existing appropriate tools in the field of self efficacy, and is the used by several researchers.

In the study, conducted by Sherer et al (1982) for designing the test, 376 psychology students should complete the self-efficacy and
multiple personality scale. Participants should determine the rate of their own agreement with each of the questions of efficacy test by choosing one the options. The original version of test consisted of 36 items of which 17 items, that measured the general self-efficacy, remained based on the analyses and the remains were removed, and these remaining 17 items had the mean equal to 57.99 and the standard deviation equal to 12.08. The reliability coefficient was obtained for the subscales of general self-efficacy and social self-efficacy equal to 0.86 and 0.71, respectively, through the Cronbach's alpha method (Keramati, 2001).

In a research for measuring the validity of test structure, Barati (1997) conducted this test along with other test, called the self-esteem scale, on a group of 100 people and reported the correlation equal to 0.6 which was significant at the level 0.05. The researcher applied the self-esteem scale because Sherer et al (1982) introduced it as one of the correlative variables with the self-efficacy and also used the split half method in order to investigate the reliability of test. Guttman split-half reliability coefficient was obtained equal to 0.76. The Cronbach's alpha coefficient or overall consistency of questions was obtained equal to 0.79 which is satisfactory (Keramati, 2001).

Keramati (2001) obtained the Cronbach's alpha coefficient or overall consistency of questions equal to 0.85 in his study, Ali-nia (2003) also obtained in his study the Cronbach's alpha coefficient or the overall consistency of questions equal to 0.78 which is acceptable.

**Results**

**Research Hypothesis:**

Training the entrepreneurial skills affects the university students' self-efficacy beliefs.

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of freedom</th>
<th>Mean square</th>
<th>Coefficient F</th>
<th>Significance (p)</th>
<th>Mean difference</th>
<th>Statistical power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grouping</td>
<td>1</td>
<td>164.22</td>
<td>4.22</td>
<td>0.049</td>
<td>7.18</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Based on the data of above table, obviously because the significant coefficient is equal to 0.49 in the grouping variable and since this value is smaller than the significant coefficient than the criterion significant coefficient 0.5, thus the main research hypothesis based on the difference between two groups of experiment and control is confirmed; in other words, there is a significant difference between the mean score of the group with the efficacy skill training and the group with no training. Therefore, the main hypothesis of research is confirmed with 95% confidence. Statistical power also shows the analysis accuracy which is relatively high, thus the obtained result can be trusted.

**Discussion and conclusion**

Findings of the analysis of covariance test indicate that this hypothesis is confirmed. In other words, the results indicate that the entrepreneurial skill training has significantly enhanced the score of general self-efficacy in the subjects through the training program considered by the researcher.

In the field of entrepreneurship skills training in affecting the students' self-efficacy and according to the obtained results for confirming the hypothesis it can be concluded that the opportunity is given to the students to understand the complex perspectives and find the solutions for the upcoming challenges according to the description of training sessions and provided contents as well as emphasis of this training on identifying the opportunities and way of utilizing them, determining and strengthening the capacity of talents and skills, self-efficacy and courage, innovation and creativity, accountability, independence, foresight and ability to deal with the ambiguity, risk taking and self-reliance, and perception of career and individual thought of himself. Therefore, according to the mentioned contents it is expected that the entrepreneurship skills training affects their self efficacy positively and is effective in achieving the appropriate employment.

**References**

socioeconomic status, achievement motivation, risk-taking, Locus of Control, creativity and self-esteem with the entrepreneurship in students at Shahid Chamran University of Ahvaz. Master's Thesis, University of Ahvaz.


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