

Identifying the Effect of Textbooks and Teaching Methods with Entrepreneurship Education in Changing Attitudes in Vocational Training Schools

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ABSTRACT

The important factors in entrepreneurial occurrence are personal, psychological and environmental factors. These factors will lead to the birth of a new institution. An individual acquires an innovative idea to create new enterprises either randomly or through careful research. Deciding or not deciding to pursue that idea depends on such factors as career, family, friends, role models, economic status and availability of resources. This study was an applied research considering the objectives. Survey method was used to collect the descriptive data. The statistical population included 150 female students in vocational training schools in the fourth district in Tehran in 2013-2014. Sample size was equal to 108 according to Morgan Table. Random sampling method was used to select the subjects. Based on the results of this study, the students (teachers) believed that the content of textbooks in entrepreneurship education has a high and significant effect in changing the students' entrepreneurial attitudes.

KEYWORDS: Entrepreneurship Education, Attitudes, Vocational Training Schools

1. INTRODUCTION

Teaching methods is a method used to transfer direct and explicit knowledge from teacher to students [1]. This component represents the method used to facilitate entrepreneurship education and includes such matters as teaching method (active and passive) and using teaching aids and education in a real environment.

Curriculum content refers to those principles and concepts offered in the form of a curriculum [1]. This component includes the issues considered in designing the content of curriculum consisting of updated and coherent materials as well as the examples used in textbooks.

According to Ahmdpoor Dariani and Azizi [2], educational efforts are better taken advantage of if the content and teaching methods were consistent with each other. This is because teaching methods and educational content simultaneously create creativity in education. Thus, teaching methods are effective in entrepreneurship education according to theoretical principles of the research.

Experts in the fields of education have classified teaching methods and techniques into different categories such as active and passive methods. In this classification, active refers to a dynamic student in the classroom. These methods cover discussion, collaboration, cooperation, problem solving, etc. In inactive teaching methods, the student is inactive and is forced to tolerate and listen to the teachers' lectures [3].

Baron [4] presented one of the earliest theories of entrepreneurship. That is why some believe that he is the founder of this term. He defines an entrepreneur as a risk taking individual. Businessmen, farmers, artisans and other private owners who bought at determined price and sold at an undisclosed price took risk.

In the event model by Bygrave [5], the important factors in entrepreneurial occurrence are personal, psychological and environmental factors. These factors will lead to the birth of a new institution. An individual acquires an innovative idea to create new enterprises either randomly or through careful research. Deciding or not deciding to pursue that idea depends on such factors as career, family, friends, role models, economic status and availability of resources. Meanwhile, a speedy event always plays an important role in the birth of a new organization. The "Bygrave" event model is represented in Figure 1, 2.

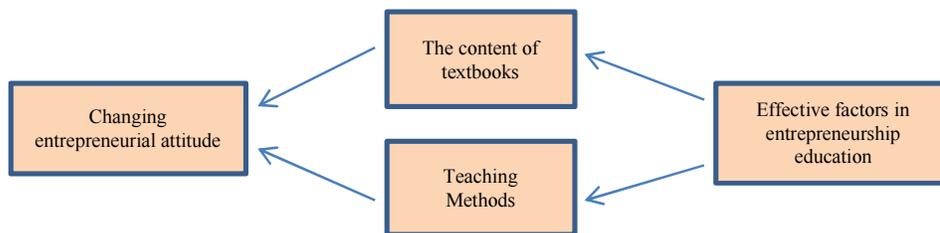


Figure 1. Research conceptual model is derived from the model of effective factors in entrepreneurship

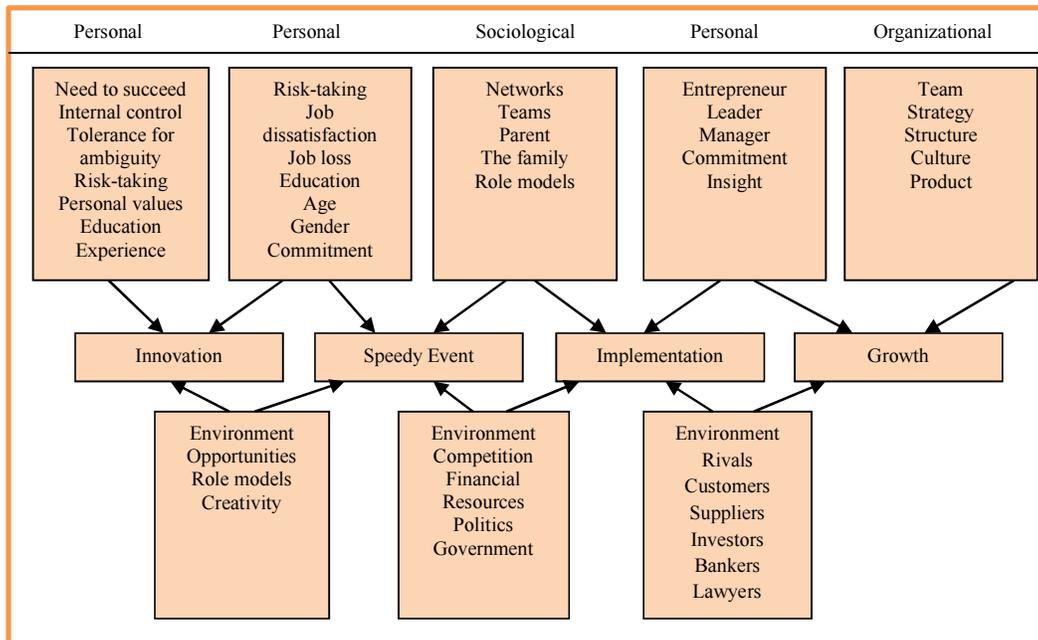


Figure 2. Bygrave event model

Much research has been done in this area among which several cases are addressed. The level of attention of each element of the curriculum to fostering entrepreneurial skills is as follows:

The level of attention of objectives of the curriculum to personal skills was equal to 30%, to managerial skills was equal to 50% and to technical skills was equal to 30%

The levels of attention of content of the curriculum to entrepreneurial skills were respectively equal to 30%, 38% and 30%

The levels of attention of curriculum evaluation methods to entrepreneurship skills were respectively equal to 30%, 30% and 30%

The levels attention of curriculum resources and learning tools to entrepreneurial skills were respectively equal to 30%, 30% and 40%

The levels of attention of curriculum time to the entrepreneurial skills were respectively equal to 35%, 50% and 38%

The levels of attention of curriculum environment to entrepreneurial skills were respectively equal to 40%, 30% and 30%

The levels of attention of curriculum teaching strategies to entrepreneurial skills were respectively equal to 30%, 40% and 30%

The levels of attention of teachers of the curriculum to entrepreneurial skills were respectively equal to 40%, 50% and 40%

The levels of attention of specialized courses in the field of education to entrepreneurship skills were respectively equal to 7%, 7% and 8%, [6].

Akhavan Jafari [7] developed the conceptual model of knowledge management with an emphasis on critical success factors. The findings showed that various elements of the curriculum should be used in order to create the necessary competencies in knowledge, attitudes and skills dimensions expected from a student in a specialized area, so that he could foster excellent mental skills, and get familiar with entrepreneurial concept and create entrepreneurial spirit.

A research was conducted on children to assess efficacy of one course of entrepreneurship education in America. A program called mini society was implemented in some schools in America. The program aimed to teach entrepreneurship to 8 to 16 years old children in a scientific manner. This program was implemented during two training test period. Status of the children was evaluated during the two tests in order to examine effectiveness of the training program. The first test was conducted prior to implementation of this project while the second test was conducted after implementation of this project. Only 27 percent of those who were willing to participate in this training knew about principles and concepts of business and entrepreneurship. However, 93% of those who participated in this training were well aware of principles and concepts of business and entrepreneurship in the second test. Moreover, the children better understood the lesson in addition to nurturing their ingenuity and getting familiar with business concepts in the in the second test according to the parents. This was actually one of the wonders of this curriculum. Purely scientific educational testing model were used through computer software as standard methods to assess performance of the project, which reflected high quality of the programs [8].

A training session with relevant mechanisms thoroughly consistent with unique attributes of entrepreneurial students was developed in order evaluate one innovative approach to entrepreneurship education. The results relevant to the questionnaire on the first approach (innovative approach) for founders of this specified course showed that the project was a completely new course, which differed from previous courses from perspectives of the students. Analysis of the two questions related to tolerability and ambiguous situations revealed that the course achieved its goal, which referred to finding opportunities with unknown consequences. The students also emphasized that they enjoyed dealing with such situations [9].

2. MATERIAL AND METHODS

This study was an applied research considering the objectives. Survey method was used to collect the descriptive data. The statistical population included 150 female students in vocational training schools in the fourth district in Tehran in 2013-2014. Sample size was equal to 108 according to Morgan Table. Random sampling method was used to select the subjects. The subjects were not selected based on a controlled criterion. A researcher-made questionnaire was used to collect data. The questionnaire consisted of close questions. Five-point Likert scale (very high, high, somehow, low, very low) was used to measure the questions. The ultimate developed questionnaire was in accordance with objectives and questions of the research. The questionnaire consisted of 6 main components and 30 questions in which 1 indicated too little importance, 5 indicated too much importance and 3 indicates average importance. "Face validity" was used to assess validity of the questionnaire. For this purpose, opinions of the experts in entrepreneurship education were used and the necessary improvements were applied to the questionnaire. Some explanatory comments were added to some questions within the questionnaire. The validity was confirmed by experts and professors.

Cronbach's alpha was used to determine reliability of the test. For this purpose, 30 questionnaires were distributed among 30 subjects after confirming validity of the questionnaires. The results indicated that alpha was close enough to one. Thus, the questionnaire and the resulting data and analysis of data were valid. The required data was collected. The collected data was analyzed using SPSS 18. Such statistical methods as descriptive statistics, inferential statistics, univariate T-test, chi-square test and the Friedman test were used to describe and analyze the collected data.

Table 1. Cronbach's alpha relevant to items in the questionnaire,

Items	Number of questions	Cronbach's alpha
Curriculum content	4 questions	0.758
Teaching methods	6 questions	0.753

Table 2. Exploratory factor analysis to examine validity of the questionnaire (KMO and Bartlett's Test)

KMO sampling adequacy	X ²	Level of significance
0.809	1631.59	0.0001

Table 3. Factor analysis results

	Eigenvalues			Extracted sum of squares			Extracted sum of squares after rotation		
	Total	Variance%	Cumulative%	Total	Variance%	Cumulative%	Total	Variance%	Cumulative%
1	9.436	31.455	31.455	9.435	31.455	31.455	3.580	11.934	11.934
2	2.761	9.204	40.658	2.761	9.204	40.658	3.364	11.214	23.148
3	1.749	5.980	46.638	1.794	5.980	46.638	3.348	11.162	34.310
4	1.602	5.340	51.979	1.602	5.340	51.979	2.986	9.954	44.263
5	1.525	5.082	57.061	1.525	5.082	57.061	2.175	7.250	51.513
6	1.300	4.333	61.394	1.300	4.333	61.394	2.054	6.847	58.361
7	1.163	3.877	65.271	1.163	3.877	65.271	1.821	6.070	64.431
8	1.019	3.398	68.669	1.019	3.398	68.669	1.271	4.238	68.669

Bartlett's test results showed that sampling adequacy index (KMO) was equal to 80.9%, which was significant at 5% level. It can be concluded that the variance within the data is explained by factors (factors). In fact, factorability of data can be verified and the proposed indicators evaluate factorability of data.

Factor analysis results shows that over 50% of the variance is explained by six factors. For this purpose, each factor was classified according to the relevant questions based on the researcher made questionnaire.

3. RESULTS

The above test results showed that z-value of the Kolmogorov-Smirnov related to effective factors in entrepreneurship education in changing entrepreneurial attitudes on the role of teachers as well as familial and environmental factors was significant at 5% alpha level. In other words, p-value is greater than 0.05. Thus, the null hypothesis relevant to data normality was rejected. As a result, chi-square test was used to test the hypotheses. The results of the table 6 shows that observed *t* is (-24.09). Thus, the null hypothesis is rejected. In other words, the observed mean (1.21) is smaller than expected (2.5). It can be concluded that regarding the

customer results of EFQM Excellence Model, the quality of Trade Promotion Organization is not only lower than that of the population average, but even weaker than that.

Table 4. Kolmogorov-Smirnov test relevant to effective factors in entrepreneurship education in changing entrepreneurial attitude

Statistics	Personal factors	The role of teachers	Familial factors	Environmental factors	The role of textbooks	Teaching method
Kolmogorov-Smirnov (z)	5.53	0.964	1.04	0.742	5.42	5.48
Level of significance	0.000	0.310	0.224	0.641	0.000	0.000

Table 5. Descriptive statistics for evaluation of the quality of Trade Promotion Organization regarding the customer results of Business Excellence model

	Deviation error of the mean	Standard deviation	Mean	Number
Customer results of Business Excellence model	0.053	0.533	1.21	99

Table 6. Univariate t-test for evaluation of the quality of Trade Promotion Organization regarding the customer results of Business Excellence model

2.5 = Expected mean						
	Mean difference	Level of significance	Degree of freedom	t	Level of confidence	
					low	high
Staff results of Business Excellence model	-1.29	98	0.001	-24.09	-1.39	-1.18

Table 7. Friedman test

Effective factors in entrepreneurship education	Rated mean
The role of textbooks in entrepreneurship education	2.01
The role of teaching methods in entrepreneurship education	2.01

Sig=0.0001; df=5; $\chi^2=459.51$

Question 3: How is the quality of Trade Promotion Organization regarding the society results of Business Excellence model?

Friedman test results showed that the chi-square (459.51) is significant with 5 degrees of freedom at 5% alpha level. Then, the null hypothesis was rejected. In other words, there is a significant difference between the effective factors in entrepreneurship education in the changing entrepreneurial attitude.

The first hypothesis: the content of textbooks in entrepreneurship education is effective in changing entrepreneurial attitude. The chi-square test was used to test this hypothesis.

Table 6. Related to the role of content of textbooks

	Percentage	Observed frequency	Expected frequency	The remaining
Low	3.7	4	35.7	-31.7
Average	5.6	6	35.7	-29.7
High	90.7	97	35.7	61.3
Total	100.0	107		

Chi-square = 158.26; Degree of freedom = 2; Significance level=0.0001

Table 7. Relevant to the role of teaching methods

	Percentage	Observed frequency	Expected frequency	The remaining
Low	1.9	2	35.7	-33.7
Average	5.6	6	35.7	-29.7
High	92.5	99	35.7	63.3
Total	100.0	107		

Chi-square = 168.92; Degree of freedom = 2; Significance level = 0.0001

The chi-square test results showed that the chi-square (158.26) is significant at 0.05 alpha level with degree of freedom = 2. Then, the null hypothesis was rejected. According to frequencies, it is estimated that the content of textbooks in teaching entrepreneurship is very effective in changing entrepreneurial attitude.

The Second Hypothesis: the role of teaching methods in entrepreneurship education is effective in changing entrepreneurial attitude. The chi-square test was used to test this hypothesis.

Chi-square test results showed that chi-square (168.92) is significant at 0.05 alpha level with degree of freedom = 2. Then, the null hypothesis was rejected. According to frequencies, it is estimated that teaching methods in entrepreneurship education is highly effective in changing entrepreneurial attitude.

4. DISCUSSION AND CONCLUSION

According to Friedman test and chi-square test results, the students believed that identifying those factors contributed to entrepreneurship education has an important and significant effect in changing entrepreneurial attitude. The first hypothesis: identifying the role of content of textbooks in entrepreneurship education is effective in changing entrepreneurial attitude. Based on the results of this study, the students (teachers) believed that the content of textbooks in entrepreneurship education has a high and significant effect in changing the students' entrepreneurial attitudes. These results are consistent with those obtained by Oladian [10]. According to chi-square test results, it can be concluded that the content of textbooks is emphasized as an effective element in teaching entrepreneurship. In fact, the content of textbooks should provide the context for comprehensive development of personality, talent, creativity and ability of the students. Thus, the content of courses related to entrepreneurship should be constantly changing and evolving according to findings. As a result, the content would be always compatible with updated science and technology.

The second hypothesis: identifying the role of teaching methods in entrepreneurship education is effective in changing entrepreneurial attitude. The results showed that the teachers believed that teaching methods have a high and significant effect in changing entrepreneurial attitudes of the students. These results are consistent with those obtained by Ahmadpoor Dariani and Azizi [11] and Ahmadpoor Dariani and Moghimi, [12]. According to chi-square test results, it can be stated that educational efforts can be better taken advantage of if the content and teaching methods were consistent with each other. This is because educational content and teaching methods simultaneously lead to creativity in education. Thus, teaching methods is an effective factor in entrepreneurship education according to the theoretical principles of the research.

Recommendations:

According to comments of the students about the content of textbooks, it is recommended that entrepreneurship textbook procurement professionals make necessary changes in following sections, so that expectations of the authors and planners would be realized regarding compilation of the textbooks. These sections are as follows.

- How to set up an Internet business:
- Accounting and finance and business transactions concepts
- Pricing principles and methods, marketing research

Teaching method is a challenging process given the importance of teaching methods in increased and consolidate learning of the audience and due to the fact that entrepreneurship education should be observed as a mechanical process. In contrast to conventional teaching methods, creative and artistic teaching methods should be used to teach entrepreneurship such as role-playing group work, discussion, active learning, inviting the graduates as lecturers.

Limitations of the study: Broad scope of entrepreneurship education made difficult selection of dimensions of the questionnaire. Hence, despite efforts to minimize the scope of variables, lots of time was spent to prepare the variables. This work made difficult data collection. Since the present study was conducted on female students in vocational training schools in the fourth district in Tehran, generalizing the results to other groups should be done with caution.

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