The Perceptions of Graduate Students about Factors Influencing the Extension of Entrepreneurship Education in College of Agriculture and Natural Resources in Iran

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Abstract: Graduate students at the college of agriculture and natural resources were surveyed in order to explore their perception about the factors influencing the extension of entrepreneurship education in the Science and Research Branch at Islamic Azad University. The methodology used in this study involved a combination of descriptive and quantitative research. The total population was 313 master and doctorate students majoring in agriculture. The results of regression analysis showed that 50% of the variance in the perception of respondents could be explained by tendency toward being successful, being innovative, entrepreneurship education in universities, role of instructor and educational contents.
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1. Introduction

Iran has faced a crisis of unemployment among graduates from universities in agriculture majors. Iranian agricultural higher education system currently has to find a comprehensive solution for the employment of these graduates (The Agriculture and Natural Resources Engineering System Organization, 2007).

One strategy that has helped many developed and developing countries to overcome the problem of unemployment, has been the development of entrepreneurship. Entrepreneurial education can play a significant role in changing views of students towards self employment and enhancing their necessary skills, in order to help them to manage a business and eventually prepare them for self employment in labor market (Nelson, 1986).

Oversupply of graduate manpower in agricultural sector, unemployment growth in their community, lack of response or positive feedbacks to the efforts made in recent decade to find a solution for unemployment problem of graduates on one side and on the other hand the necessity to move to competitive market based agriculture created an important ground for paying more attention to entrepreneurship.

Wenneker and Thurik (1999) identify three dimension of entrepreneurship – the condition which leads to entrepreneurship, the attributes and the impacts of entrepreneurship. In regard to individual, the conditions for entrepreneurship are culture and incentives, elements are attitudes, skills and creativity and the impacts are self-realisation and income.

Proposing new ideas based on the role of entrepreneurship in increasing job opportunities, competitiveness, improvement in manpower productivity, technology development, wealth generating and social welfare level and also existence of strong relation between entrepreneurial development and economic growth of the countries have all resulted in a serious consideration of entrepreneurship in new economic theories and have been regarded as a provocative engine in economical social growth and development of countries (Audretsch, 2002; Zoltan, 2006).

This role of entrepreneurship in development of agricultural economy is regarded as one of the major requirement for agricultural development (Smit, 2004). Such situation has brought about an increasing demand in agricultural entrepreneurship education in recent years and has resulted in more emphasize by researchers and government authorities in different countries (McElwee, 2005).

As a result, entrepreneurial education has become a serious necessity for the governments, in order to upgrade the capacities and abilities of young graduates to enter in a competitive job market in agricultural sector (Smit, 2004).

Indeed, the entrepreneurship is a key element in creating employment, a solution to combat the unemployment crisis and a response to community diverse demands. Therefore, it is considered as one of the important fundamental aspects in agricultural development plans (Higgins and Morgan, 2000; Smit, 2004).

Entrepreneurship eduction in universities could enhance the skills of students in areas related to starting a new business.. According to Smilor (1997) and Kilby (1971), entrepreneurial skills refer to those activities, or practical know-how, that are needed to establish and successfully run a business enterprise. These may comprise such areas as finance, accounting, marketing or production. Others want to make a distinction between managerial and entrepreneurial skills.

With a look at the background of education in agricultural sector in Iran, it can be observed that the amount of investment and attention to this issue from different dimensions has never been at a level proportionate to employment criteria. Furthermore, considering available resources, the expansion of this sector in term of frequency, employees and beneficiaries of this sector (3.5 million individuals as beneficiaries) were not enough to fulfill country's demands (Institute of Applied-Scientific Educations, 2002).

In a research, Zamani (2001) has emphasized on establishing self-employment and entrepreneurship mentality among students in the colleges and universities. The findings of study by Streeter et al (2002) show that trend toward entrepreneurial education at Cornell University is strong; the conceptual framework clarifies the different pathways for creating a university wide approach toward entrepreneurship; the radiant model (entrepreneurship out of university) is extremely appealing to students, parents and alumni; the magnet model (entrepreneurship inside university) is easier to administer and present in various methods; the magnet model is simpler to implement, it may lead to conflicts in a long run because the benefits and facilities may not be distributed equally among the university students.

Kuratko (2003) in a study entitled emergence of entrepreneurial education: development, trends and challenges, pointed out the entrepreneurship has emerged and developed over the recent two decades and its recent growth in curricula and programs dedicated to entrepreneurship has been very considerable. The number of faculties and universities which deliver curricula in connection to entrepreneurship has surged to over 1600 in 2005 in comparison to few programs in 1970's. This huge development has resulted in some academic legislative challenges for entrepreneurship that this article has focused on these trends and challenges of entrepreneurial education in the universities in the 21st century.

UNESCO (2004), in its global prospect of higher education for 21st Century, has described the new universities as: "A place in which the entrepreneurial skills in order to facilitate the graduates' capabilities and promoting them to job producers are developed". In another research entitled conceptual framework for the assessment of the efficiency of entrepreneurial education of programs aimed at entrepreneurship, there is a meaningful relationship between entrepreneurial education and the tendency to entrepreneurship. Knowing the fact that entrepreneurial education of programs can change the entrepreneurship purpose, which is to examine the economic relation of entrepreneurship activity, is fascinating. In this research, the first stage goal is framework development that enables us to explain the programs of entrepreneurial education alongside with the changes in visions and participants' beliefs in the program and then presents the assessment of the impact of entrepreneurial education of programs on participants' goal (Volery and Muller, 2006). The research question for this study is: what are the perceptions of graduate students in the college of agriculture and natural resources about factors influencing the extension of entrepreneurship education in Islamic Azad University, Science and Research Branch?

The purpose of this study was to determine the perceptions of graduate students in the college of agriculture and natural resources about factors influencing the extension of entrepreneurship education in Islamic Azad University, Science and Research Branch. The objectives were as follows: 1) to identify personal characteristics of respondents; 2) to identify factors affecting the extension of entrepreneurship education and 3) to determine the relationship between factors and perception of respondents about the extension of entrepreneurship education.

2. Material and Methods

The methodology used in this study involved a combination of descriptive and quantitative research and included the use of correlation, regression and descriptive analysis as data processing methods. The total population for this study was 1746graduate students at college of agriculture and natural resources at Islamic Azad University, Science and Research Branch, Tehran, Iran (1290 master students, 456 PhD students) and by using Cochran formula, 313 were selected through random sampling method.

Measuring respondent's attitudes towards entrepreneurship extension has been achieved largely though structured questionnaire surveys. The usual questionnaire approach to measure attitude is to include a range of semantic-differential (with good/bad options for example) and Likert items (with agree/disagree options for example) to operationalize the attitude construct. The final questionnaire was divided into several sections. The first section was designed to gather information about personal characteristics of respondents. The second section was designed to measure the attitudes of respondents about their entrepreneurship characteristics. The respondents were asked to indicate their agreements by marking their response on a five point Likert-type scale. The next section explored the role of entrepreneurship education in universities were presented in a 5-point Likert format with responses from 1—completely disagree to 5—completely agree. The last section was designed to identify the most appropriate entrepreneurship extension methods. The variables and their measurement scale are presented in table 1.

Table 1: Variables and their measurement scale

Variables	Measurement Scale
Entrepreneurship characteristics	Five- point Likert
Role of entrepreneurship educations in universities	Five- point Likert
Entrepreneurship extension methods	Five- point Likert
Gender	Categorial
Age	Categorial
Educational Level	Categorial
Marital Status	Categorial
Employment Status	Categorial

Content and face validity were established by a panel of experts consisting of faculty members at Islamic Azad University, Science and Research Branch and some specialists in the Ministry of Agriculture. Minor wording and structuring of the instrument were made based on the recommendation of the panel of experts.

A pilot study was conducted with 30 persons who had not been interviewed before the earlier exercise of determining the reliability of the questionnaire for the study. Computed Cronbach's Alpha score was 90.0%, which indicated that the questionnaire was highly reliable.

Key dependent variable in the study included entrepreneurship education which was measured by perception of respondents about 14 statements. The independent variables in this research study were tendency toward being successful, accepting risks, being innovative, controlling own destination, being independence, entrepreneurship education in universities, role of instructor, educational contents and entrepreneurship extension methods. For measurement of correlation between the independent variables and the dependent variable correlation coefficients have been utilized and include Pearson test of independence.

3. Results

The results of descriptive statistics indicated that 175 of respondents were male and 217 were single. Majority of students had master degree and more than 180 were employed. Almost half of respondents indicated that they were pursuing a degree in agriculture.

In order to finding the perception of students about the most appropriate methods in entrepreneurship education, respondents were asked to express their views. As can be seen in the table 2, the most appropriate method based on the freedman test was attending in entrepreneurship exhibitions and visiting entrepreneurship centers (n=10.52) and the least important was attending the students entrepreneurship exhibition (n=6.46).

Pearson coefficient was employed for measurement of relationships between the perception of students and factors influencing entrepreneurship extension. Table 3 displays the results which show that there was relationship between perception of respondents and tendency toward being successful, accepting risks, being innovative, controlling own destination, being independence, entrepreneurship education in universities, role of instructor and educational contents.

Table 4 shows the result for regression analysis by stepwise method. Independent variables that were significantly related to perception of students about factors that influence the entrepreneurship extension were subjected to regression analysis. The result indicates that 50% of the variance in the perception of respondents could be explained by tendency toward being successful, being innovative, entrepreneurship education in universities, role of instructor and educational contents.

Table 2: Perception of respondents about the most important methods of entrepreneurship education

Statement	Freedman Test Number	Priority
Entrepreneurship exhibitions and visiting entrepreneurship centers	10.52	1
Students contact with successful entrepreneurs	10.19	2
Seminar and lectures about entrepreneurship	10.18	3
Publication of newsletter about entrepreneurship	9.29	4
Supporting research and students projects about entrepreneurship	9.24	5
E learning programs about entrepreneurship	8.95	6
Holding workshops for converting ideas to economic activities	8.42	7
Establishing entrepreneurship centers in universities	8.18	8
Competition and exhibition about entrepreneurship	7.87	9
Providing books about entrepreneurship for libraries	7.76	10
Publishing scientific journal about entrepreneurship	7.63	11
Workshops about marketing and regulation about entrepreneurship	7.12	12
Showing movies about entrepreneurship	6.59	13
students entrepreneurship exhibition	6.46	14

Table 3: Correlation measures between independent and dependent variable

Independent variable	Dependent variable		
		R	Sig.
Tendency toward being successful	Entrepreneurship extension	0.182	0.001**
Accepting risk	Entrepreneurship extension	0.137	0.015*
Controlling own destination	Entrepreneurship extension	0.121	0.033*
Being innovative	Entrepreneurship extension	0.174	0.002**
Being independence	Entrepreneurship extension	0.123	0.029*
University entrepreneurship education	Entrepreneurship extension	0.541	0.000**
Instructors	Entrepreneurship extension	0.582	0.000**
Educational Content	Entrepreneurship extension	0.556	0.000**

**p<0.01 *p<0.05

Table 4: Multivariate Regression Analysis.

Variable	B	BBeta	d	Ssig.
Educational contents (X1)		0.287		0.000
Entrepreneurship education in universities (X2)		0.243		0.000
Instructors(X3)		0.242		0.000
Tendency toward being successful (X4)		0.140		0.001
Being innovative (X5)		0.118		0.006

R^2=.0.53

Y=0.287(X1)+0.243(X2)+0.242(X3)+0.140(X4)+0.118(X5)

4. Discussions

Entrepreneurial education has a tremendous potential to help in the employment status of students in Iran. The development of entrepreneurial education results in creating more jobs and employment sustainability could be achieved over time. Therefore, certain special factors in developing entrepreneurial education among students in the universities should be identified and need to be carefully examined.

Innovative strategies need to be developed that cater specifically the entrepreneurship educational needs of students. Universities in Iran need to provide practical training in entrepreneurship to their students, to make them more aware of the benefits of entrepreneurship and to address the factors that impact on developing entrepreneurial education.

The findings reflect an important fact, namely that contents of entrepreneurship education would have a positive impact on perception of students about entrepreneurial education. In this regard, a sound educational program is a necessary prerequisite for enhancing the capacity of students to start entrepreneurship activity.

Based on the findings, role of instructors is considered as one of the most important issues. Universities have to ensure that entrepreneurship education should be taught by skillful and experienced instructors especially those who are involved in entrepreneurship activities.

To achieve the goal of entrepreneurship education, sustainability in training students need to be assured over a period of time. Options that provide access to entreprenuership education need to be carefully examined.

Therefore innovative strategies need to be developed that cater specifically to the needs of young students in the universities. In this regard, it is important to help and introduce NGOs and private sector to participate in developing entrepreneurship activities..

The issue is not only the training students about entrepreneurship, but it is equally critical to provide training, tools and guidance to make students aware of what entrepreneurship can do for them, and what they can do with being entrepreneurs.

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