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IMPROVING UNIVERSITY STUDENTS' ENTREPRENEURIAL KNOWLEDGE AND SKILLS

Abstract:

Entrepreneurship oriented education would help university graduates find a job or start a new career. That is why universities try to manage entrepreneurship education in order to improve entrepreneurial knowledge and skills of students. In Iran, universities focused on entrepreneurship education during last decades. The main purpose of this article was to investigate how universities can play an effective role in entrepreneurial education in order to improve entrepreneurial knowledge and skills of their students. In this survey, a group of 110 academics out of an access population (N=382) of Bu-Ali Sina academic staff (Hamedan province, IRAN) were randomly selected. A questionnaire was designed and then validated asking a panel of experts for their comments. Reliability of the instrument calculated to be 0.90 in alpha Cronbach's scale. Results of the enquiry indicated that cooperation of universities with other local organizations (like outreach programs), elaborately directed apprenticeship courses, up-to- date educational content (in response to cutting edge technologies) and use of creativity- focused methods of teaching were mentioned to be the most effective ways for enhancing entrepreneurial knowledge and skills of students. Based on exploratory factor analysis, a number of activities such as informing and motivating toward entrepreneurship, career education and Curriculum revitalization proved to be the most influential factors for improving students' entrepreneurship knowledge and skills. At the End, some recommendation was introduced for universities in planning and implementing entrepreneurship education program.

Keywords:

Entrepreneurship, Entrepreneurship Education, Entrepreneurial Knowledge, Entrepreneurial Skills.

INTRODUCTION

Institutions involved in higher education have been mobilized into research and implementation of new systems by the emergence of the entrepreneurial university (Cavaller, 2011). Entrepreneurship education should be emphasized in the industry to produce better quality entrepreneurs in the future (Jaafar and Aziz, 2008). In recent decades, we have been witnessing a remarkable escalation in entrepreneurship education at various universities and colleges around the globe, including Iran (Karimi et al., 2010). Entrepreneurship provides millions of job opportunities, offers a variety of consumer goods and services, and generally increases national prosperity and competitiveness.

Employment is not only one of the most important current affairs of Iranian society today, but also will remain as such for decades to come, due to increased population growth in last two decades. It is believed that how to deal with unemployment can decide stability of governments and future prospects of political parties. Providing job opportunity for thousands of unemployed university graduates has been recognized as one of the most demanding challenges facing our society today; and sometimes has been labeled even as one of the most important security threats of the country (Hosseini lorgani et al., 2008).

In Iran, an ever-increasing trend of young population in one hand; while a significant boost in the development of higher education institutions all across the country, and lack of a rather holistic and comprehensive plan on supply and demand of educated manpower, on the other hand contributed heavily in the creation of such phenomenon. Thus, entrepreneurship has been introduced as one of most recent counterattacks to this problem (SariOlghalam, 2007).

It is worth to be mentioned here that as a result of emergent technologies and openings of new horizons, entrepreneurship has recently been an interesting issue in much of the developed world as well (Block and Stumpf, 2003; Mccline, 2004). Saeedi Mehrabad and Mohtadi (2008) explained that concept of entrepreneur-ship from the very early stages of human life on the planet has coexisted all human endeavors towards earning a living and his/her survival. Oosterbeek et al. (2009) demonstrated that to reach higher grounds of economical success, more entrepreneurs would be needed and this could be achieved only through providing appropriate educational courses. Such educational opportunities would create more responsible graduates mastering entrepreneurial skills that could take their chances open-mindedly and manage forthcoming challenges of their enterprise more successfully (Urbano et al., 2008). Educating current students as future entrepreneurs clarifies nature and importance of the phenomenon (Hill and Cinneid, 2001); develops appropriate attitudes (McVie, 2001) and eventually brushes up student's practical skills (Leitch and Horrison, 2001). Turnball (2001) demonstrated the positive impact such education could have on job security, social status, job opportunities and economical

atmosphere of the society as perceived by potential entrepreneurs taking part in such courses.

Baharun and Sheikhahmad (2002) declared that entrepreneurship-oriented education would help university graduates find a job or start a new career. Meanwhile, inducing students' entrepreneurial initiations guarantees them running a successful occupation in the future. Jones and English (2005) revealed that educating entrepreneurship could help building students' self-confidence and develop their knowledge, therefore enabling them to establish new careers. Khosravipuor et al. (2008) categorized factors enhancing entrepreneurial skills of students into educational (namely educational methods, content of education, facilities and teachers/ students characteristics) personal and peripheral factors. They also discovered that skills of educators explained most of attitude change towards entrepreneurship in the students. Hosseini et al. (2003) reported that job related extracurricular activities, creative teaching methods and appropriate educational content were the most important factors influencing students' entrepreneurship. Psychological factors, supports and services, academic and work skills were presented as important influential factors on entrepreneurs (PoorAtashi and Mokhtarnia, 2009). To transform a traditional university into a pioneer university, in terms of entrepreneurship, Chambers (2002) recommended current programs and educational content to be reviewed and then specific training courses be provided.

Generally speaking, entrepreneurship higher education plays a decisive role in promoting entrepreneurial activity (Nabi and Liñán, 2011). In overall, not much attention has been given to the conceptual and theoretical underpinnings of entrepreneurship within higher education scholarship (Mars and Rios-Aguilar, 2010).

In the present research, an exploratory factor analysis was employed to discover potential mechanisms of enhancing students/graduates entrepreneurship as understood by Bu-Ali Sina academic staff. It goes without saying that findings of such research would be illuminating in designating possible interventionist mechanisms and manipulation of universities toward delivering more entrepreneurially confident graduates.

MATERIALS AND METHODS

In this applied research survey, academia of Bu-Ali Sina university formed access population of the study (N= 382) out of which a sample size of 110 were randomly selected based on Krejcie and Morgan (1970) sample size instructions. Questionnaire was designed in accordance with review of literature; then validated by a panel of experts from Bu-Ali Sina University. To acquire reliability of the instrument, Cronbach's alpha was calculated using SPSS 16 and proved to be at 0.90. In the next step, questionnaires were administered, data collected and analyzed with SPSS 16. Apart from descriptive analysis, a factor analysis approach was attempted as the core of our

study.

According to research findings, respondents were described as 92% male, 8% female, 42 years old on average, with average 12 years teaching experience scattered across five different disciplines and majority of them are assistant professors. Most of the respondents were somewhat familiar with entrepreneurship conceptualization, meanwhile only 30% mentioned to have experienced some kind of self-employment.

In the second part of the questionnaire, respondents were asked to ratify almost 27 items according to their potential impact on the enhancement of entrepreneurial skills of students currently studying in the university, utilizing a Lykert-type scale, in which 1, 2, 3, 4 and 5 meant very low, low, somewhat, high and very high impact, respectively.

A factor analysis approach was utilized to investigate and explore most important variables, then categorize them into separate groups. Each group was labeled by a panel of experts as a particular factor. Bartlet and KMO statistics were measured to be 1.112 and 0.78, respectively; while statistically significant paved the way for a Varimax rotation technique. Table 1 and 2 shows findings from this stage of investigation summarized.

First explored item was labeled orientation factor, showing that entrepreneurial concepts made familiar for students play an outstanding part in the enhancement of so-called concepts. Second item, revealed that experiential learning of entrepreneurial skills while studying in the university labeled as “career education factor” must be taken into consideration while pushing for developing students’ entrepreneurial skills. A curriculum revitalization initiative towards incorporating entrepreneurial knowledge, aspiration, skills and attitudes (KASA) into the educational program was discovered to be third most important factor.

Table 1. Mechanisms to enhance student’s entrepreneurial skills prioritized by BASU academics.

Rank	Mechanisms	Mean	SD	CV
1	Close relation with local executive organizations	4.250	0.757	0.178
2	Proper direction of apprenticeship courses	4.191	0.751	0.179
3	Educational content consistent with recent scientific and technological advances	4.190	0.580	0.138
4	Moving from traditional teaching techniques towards creatively-centered methods	4.150	0.715	0.172
5	Designing university curricula based on job market demands	4.130	0.630	0.152
6	Providing experiential opportunities for students	4.100	0.758	0.184
7	Directing student projects toward self-employment and entrepreneurship	3.870	0.824	0.212

8	Job placement and vocational counseling	3.840	0.774	0.201
9	Providing extracurricular activities to develop job-related skills	3.838	0.765	0.199
10	Vocational orientation and development of students' entrepreneurial ideas	3.787	0.658	0.173
11	Planning field trips to experience future job opportunities	3.770	0.851	0.225
12	Designing appropriate content of education based on students' mental and skill capabilities	3.760	0.767	0.203
13	Developing science and technology parks inside universities	3.717	0.821	0.220
14	Teaching computer skills and internet applications	3.700	0.926	0.250
15	Teaching entrepreneurship as the content of education	3.697	0.734	0.198
16	Holding workshops on creative thinking and brainstorming	3.686	0.764	0.207
17	Developing entrepreneurship centers inside universities	3.596	0.844	0.234
18	Inviting successful entrepreneurs in training relevant skills	3.580	0.912	0.254
19	Teaching students how to write business plan	3.500	0.893	0.255
20	Teaching academia on entrepreneurial skills	3.460	0.869	0.251
21	Directing student associations on entrepreneurship	3.440	0.879	0.255
22	Educational planning based on students' needs and aspirations	3.434	0.810	0.235
23	Holding conferences on entrepreneurship inside the university	3.390	0.908	0.267
24	Publishing educational materials on entrepreneurship	3.310	0.872	0.263
25	Informing student on how to record a company or a new enterprise	3.290	0.902	0.274
26	Informing students on rules of privatization	3.180	0.808	0.254
27	Informing students of financial tools, accounting principles and budgeting	3.120	0.769	0.246

RESULTS AND DISCUSSION

Entrepreneurship has long been part of human survival story. It has recently been pushed forward again out of economical challenges of new millennium both in first and third world countries. Prospective leaders of next generation of organizations need to be even more entrepreneur. That is why university education must be transformed so as to be able to meet the needs of upcoming job markets. This enquiry asks the most important players of an educational system, meaning its educators what must be done to guarantee future university graduates high quality entrepreneurial skills. A survey research followed by an exploratory factor analysis approach was employed to prioritize the most important measures and underlying factors towards introducing the Entrepreneur University of the Future, in the viewpoints of a sample of Bu-Ali Sina academics.

An amalgamation of white and blue color activities through integrating university and organizational learning experiences accompanied by a redefinition of educational contents and teaching techniques were the most important mechanisms towards an entrepreneur university. It is to prevent what von Graevenitz et al. (2010) explained while studying the effects of entrepreneurship education, find that intentions to found declined somewhat although the course had significant positive effects on students' self-assessed entrepreneurial skills. This came as endorsing results by Hosseini et al.

(2003) and Chambers (2002).

Factors underlying respondents' opinions on how to transform current universities into effective supplier of future entrepreneurs were explored to be student's orientation, career education and curriculum revitalization using a factor analysis approach. Results were supported by Brown (2003), Chambers (2003) and Beyers (2001). It can be concluded here that academic staff as leverage point of any transformation must be retrained in workshops such as: creative teaching techniques, entrepreneurs and entrepreneurships, brainstorming and incubating ideas. Adding entrepreneurship concepts and theories into current curriculum is necessary as the first step towards a systemic incorporation of entrepreneurial skills into the whole educational system and eventual transformation of the institution. One study suggested that courses should be designed so as to help students produce a business plan and the feasible ones be sponsored by existing entrepreneurs (Akpomi, 2008).

Table 2. Explored factors and their correspondent variables.

Factor	Variable	Eigen value
Orientation	Inviting successful entrepreneurs in training relevant skills	0.501
	Directing student associations on entrepreneurship	0.641
	Publishing educational materials on entrepreneurship	0.644
	Informing student on how to record a company or a new enterprise	0.781
	Teaching students how to write business plan	0.822
	Informing students of financial tools, accounting principles and budgeting	0.692
	Informing students on rules of privatization	0.714
Career education	Providing experiential opportunities for students	0.654
	Proper direction of apprenticeship courses	.0694
	Directing student associations on entrepreneurship	0.580
	Vocational orientation and development of students' entrepreneurial ideas	0.567
	Teaching academia on entrepreneurial skills	0.598
Curriculum revitalization	Holding workshops on creative thinking and brainstorming	0.540
	Designing university curricula based on job market demands	0.639
	Designing appropriate content of education based on students' mental and skill capabilities	0.689
	Teaching entrepreneurship as the content of education	0.515
	Educational planning based on students' needs and aspirations	0.630
Auxiliary	Holding conferences on entrepreneurship inside the university	0.566
	Teaching computer skills and internet applications	0.586
	Job placement and vocational counseling	0.633
	Close relation with local executive organizations	0.564

REFERENCES

Akpomi ME (2008). Entrepreneurship among graduates-to-be of business/management faculties and economic development in Nigeria. Eur. J. Econ. Financ. Adm. Sci., 14: 52-61.

Block A, Stumpf SA (2003). “Entrepreneurship Education Research: Experience and Challenge”; in Sexton DL, Kasarda JD (Eds), The State of the Art of Entrepreneurship; PWS-Kent Publishing Company, Boston.

Cavaller V (2011). Portfolios for entrepreneurship and self-evaluation of higher education institutions.

Chambers R (2002). Human Capital for Entrepreneurship in Higher Education. London: Edgar.

Hill S, Cinneid BO (2001). Entrepreneurship Education- Case Studies from The Celtic tiger. In Anderson AR, Jack SL (eds). Entreprise and Learning. Aberdeen, University of Aberdeen.

Hisrich R, Peters M (2005). Entrepreneurship (starting, developing and managing new enterprises). New York: Mc Grow Hill.

HosseiniLorgani M, MirArabRazi R, Rezaie S (2008). Entrepreneurship in new Millenium; Substruction for Higher Education Postgraduates’ Employment. J. Res. Plan. Higher. Educ., 2(50): 119-130 (In Persian).

Jaafar M, Aziz ARA (2008). Entrepreneurship education in developing country: Exploration on its necessity in the construction programme. J. Eng. Design Technol., 6(2): 178-189.

Jones C, English J (2005). A contemporarg approach to enterpreneurship education, J. Educ. Train., 46(8/9): 416-423.

Karimi S, Chizari M, Biemans HJA, Mulder M (2010). Entrepreneurship education in iranian higher education: The current state and challenges. Eur. J. Sci. Res., 48(1): 35-50.

Leitch CM, Harrison RT (2001). Education and Development. In Anderson AR, Jack SL (2001). Entreprise and Learning. Aberdeen, University of Aberdeen.

Mars MM, Rios-Aguilar C (2010). Academic entrepreneurship (re)defined: Significance and implications for the scholarship of higher education. Higher Educ., 59(4): 441-460.

Mccline RL (2004). “Opportunity Recognition: An Exploratory Investigation of a Component of the Entrepreneurial Process in the Context of the Health Care Industry: Theory and Practice, Tertiary Educ. Manage., 25(2): 81-94.

McVie G (2001).Ed (Anderson and Jack) Scotlands good for Enterprise from primary to PLC. Center for Enterpris Education.

Nabi G, Liñán F (2011). Graduate entrepreneurship in the developing world: Intentions, education and development. Educ. Train., 53(5): 325-334.

Oosterbeek H, Praag M (2009). The impact of entrepreneurship education on entrepreneurship skills and motivation. Available at: <http:// www.sciencedirect.com/science? Eur. Econ. Rev., 54(3):

442-454

PoorAtashi M, Mokhtarnia M (2009). A Study of Factors Influencing Agricultural Graduates' Entrepreneurship; From viewpoint of Faculty Members of University Collegeof Agricultural and Natural Resources, University of Tehran. Iranian J. Agric. Econ. Dev. Res., 2(40): 115-122 (In Persian).

Rasmussen E, Sorheim R (2009). Action-based entrepreneurship education. Available at: <http:// www.sciencedirect.com/science? Technovation, 20(2): 185-194.

SaeediMehrabad M, Mohtadi MM (2008). Impact of Entrepreneurship Education on Entrepreneurial Traits. J. Entrep. Dev., 1(2) 57-73 (In Persian).

Sariolghalam A (2007). The role of universities and higher education institutes in Students entrepreneurship.(In Persian) Proceeding of Entrepreneurship and Higher Education. University of Semnan, pp. 427-439.

Van Der Sluis J, Van Praag M, Vijverberg W (2008). Education and entrepreneurship selection and performance: A review of the empirical literature. J. Econ. Surv., 22(5): 795-841.

Von Graevenitz G, Harhoff D, Weber R (2010). The effects of entrepreneurship education. J. Econ. Behav. Organ., 76(1): 90-112.