

## **Entrepreneurship Education in Iranian Higher Education: The Current State and Challenges**

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### **Abstract**

Entrepreneurship has long been considered a significant factor for socioeconomic growth and development because it provides millions of job opportunities, offers a variety of consumer goods and services, and generally increases national prosperity and competitiveness. Due to this positive impact of entrepreneurship, recent decades have seen a tremendous rise in entrepreneurship education at various universities and colleges around the globe, including in Iran. In the middle of this expansion remains the challenges and problems of development and changes for entrepreneurship.

This paper investigates the state, trends, challenges and solutions in entrepreneurship education in Iran which emerged from an extensive review of literature. The literature reviewed indicates that entrepreneurship education in Iranian higher education faces with economic, political, social, and cultural challenges. Also this article offers some approaches and recommendations for resolving the challenges as well as encouraging and fostering entrepreneurship in higher education. The findings of this study provide valuable insights for policy makers, educators, students and graduate entrepreneurs. Stakeholders could use this study to make better choices in relation to the improvement of entrepreneurship education in Iranian higher education system.

**Keywords:** Entrepreneurship Education, Higher Education, Entrepreneurship Challenges, Iran

## 1. Introduction

During the past decade, many developing countries including Iran have been faced with various problems such as population growth, lack of improvement in economy, excessive number of graduates, government policies to downsize its structure and inability of the private sector to provide work for the graduates. These problems forced them to find a solution for unemployment problem of graduates, alternative preparation for the labor market and providing further opportunities for learning.

All these problems and crisis have caused to pay more attention to entrepreneurship as a fundamental issue and have brought about an increasing demand in entrepreneurship education in recent years. Serious consideration of entrepreneurship has been resulted to some issues such as increasing job opportunities, competitiveness, productivity improvement, increasing social and economic welfare level (Azizi et al., 2010). Thus entrepreneurship has been regarded as one of the necessities in development of countries (Zoltan, 2006) and the governments must pay special attention for entrepreneurial education in order to expand the student's capabilities for the entrepreneurship (Smit, 2004).

Through appropriate training methods, societies can create entrepreneurs who will develop small businesses and maximize the economic potential of an area. At this point, colleges and universities can function as a catalyst (Ibicioglu et al, 2008). Higher education institutions can help and support graduates to encounter these changes with introducing entrepreneurship in educational and research programs (Wallace and Nilsson, 1997). Recently in Iran, very effective steps have been taken in promotion of training and supporting entrepreneurship and entrepreneurs, but it seems that with regard to importance of the subject, the performed actions are not enough at all and confront several challenges and problems for at least one decade ahead.

The remainder of the present paper is organized as follows:

1. Entrepreneurship and entrepreneurship education and its state around the world.
2. Current state of entrepreneurship education in Iranian higher education, its challenges and problems, along with a set of conclusions and recommendations for resolving them.

## 2. Entrepreneurship

Entrepreneurship has been mentioned as an important component for the economic development (Volkman, 2006). In the same path, entrepreneurship has its research finger pointed to an individual's ability to turn ideas into action. Similarly, Curavić (2010) states that before anything entrepreneurship includes creativity, innovation, risk taking, and the ability to plan and manage projects in order to attain objectives.

Although each of these definitions considers entrepreneurship from a slightly different viewpoint, each contains similar concepts (Niyonkuru, 2005). Kuratko (2003) states entrepreneurship is more than the mere creation of business. Although that is certainly an important facet, it's not the complete picture. "Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks in terms of time, equity, or career; the ability to formulate an effective venture team; the creative skill to marshal needed resources; and fundamental skill of building strong business plan; and finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion." (Kuratko & Hodgetts, 2004, p. 30). Entrepreneurship is the behavior of a person who displays the traits (need for achievement, need for power, risk-taking tendency and competitiveness) necessary to obtain or attain something in life, to research and become self-sufficient.

## 3. A "Yes" or "No" with Entrepreneurship Education

Most of empirical studies conducted indicate that entrepreneurship can be taught and that education can foster entrepreneurship even more (Mitra & Matlay, 2004; Kuratko, 2005; Harris and Gibson,

2008; Chell and Allman, 2003; European Commission, 2006). Entrepreneurial education can play a significant role in changing views of students towards self-employment and through education on necessary skills to manage a business has prepared them for self-employment labor market (Nelson, 1986).

Entrepreneurship education tries to prepare people, particularly youth, to be responsible, take risks, manage the business and learn from the outcomes by immersing them in real life learning experiences. Entrepreneurial education can change students' view regarding self-employment and prepare them with skills needed to supervise a business through education (ODEP, 2008).

Three elements are very important in entrepreneurial education process: 1) recognizing a market opportunity and creating a business idea, service or product that is to grasp an opportunity which is the basis of the entrepreneurship process, 2) organizing and devoting resources needed to pursue and turn a situation into an opportunity with the hope of surviving outside the uterus, 3) creating, executing, performing and operating a business organization that performs toward conduction of the time to act opportunity (Sahlman and Stevenson, 1992)

#### **4. Entrepreneurship Higher Education Around the World**

Necessity and importance of entrepreneurship and its education has led to a dramatic rise in the number and status of entrepreneurship programs at colleges and universities (Finkle and Deeds, 2001; Kuratko, 2005; Matlay, 2005). The popularity of entrepreneurship courses has increased dramatically among both graduate and undergraduate students (Finkle and Deeds, 2001).

The United States has the longest tradition of fostering entrepreneurship at universities and business schools, comparatively to any other countries. As a matter of fact, Ibicioglu, et al, (2008) in the writing stated that universities in the United States are generally regarded as the pioneers of academic entrepreneurship education. It is in the United States that this field has achieved perhaps the greatest growth rate. It is said that promoters of America's economy are entrepreneurs (Ibicioglu, et al, 2008). According to the United States Department of Labor (2010) 25.8 million small businesses employ more than 50 percent of the workforce, generate more than half of the nation's GDP, and are the principal source of new jobs in the U.S. economy.

From the reviewed literature, it can be understood that entrepreneurship education has grown and received recognition by many universities and colleges in America as an academic field (Kuratko, 2003). As early as 1947, Harvard Business School offered the first entrepreneurship course titled "Management of New Enterprise" (Katz, 2003). By 1990 in the USA, more than 400 Schools and universities had been offering at least one course in the field of entrepreneurship (Vesper and Gartner, 1997; Fiet, 2001; Volkmann, 2004), while at the start of the new millennium, entrepreneurship education in America has exploded to more than 2,200 courses at over 1,600 schools, 277 endowed positions, 44 refereed academic journals, mainstream management journals devoting more issues (some special issues) to entrepreneurship, and over 100 established and funded centers (Katz, 2003; Kuratko, 2005). At the beginning of the 21st century, more than 50 universities in the USA were offering not only single courses as part of entrepreneurial training, but also complete programs (Koch, 2003).

In Europe, the development of entrepreneurship education has been much slower than in the United States (Guzmán and Liñán, 2005). Regarding Europe's welfare system, people are less willing to take risks. This attitude has impressed the universities and educational systems, which traditionally has been focused on ensuring students can secure future jobs—not become entrepreneurs. But during the past decade, phenomena like globalization, the rapid development of technology and the lower cost of travel have completely changed the nature of work. Universities must prepare students to work in a dynamic, rapidly changing entrepreneurial and global environment (Wilson, 2008). According to Guzmán and Liñán (2005) the United Kingdom and France implemented some entrepreneurial education initiatives in the 1970s. In the other European countries, it has only been since the 1990s that a real diffusion of entrepreneurial education has taken place. However, it is very difficult to quantify

the level the diffusion of this kind of education because unlike the United States, in Europe, there are not large associations that gather researchers and teachers together, and that are recognized as an essential path. These two writers concluded that it is difficult to assess the situation.

Results of a study regarding entrepreneurship education conducted by Wilson (2004) showed that entrepreneurship courses at European universities stay mainly electives at both undergraduate (73% electives) and postgraduate level (69% electives). They also tend to be offered in stand-alone courses, rather than being integrated across the curriculum (Niyonkuru, 2005). Based on results of a survey conducted by European Commission (2008) it is estimated that more than half of Europe's students at the higher educational level (about 11 million) do not have access to entrepreneurial education. In other words, they have no opportunity to engage in - or extra-curricular activities that can stimulate their entrepreneurial spirit.

Recently, there has been an increased interest in entrepreneurship education among some countries, especially East European and Asian countries. Unfortunately, in some countries such as Latin America and Africa entrepreneurship education has not received such recognition. However, there are surely but slowly some developing countries paying more attention to entrepreneurship education, there are few courses finding their ways in undergraduate and Master's curricula (Niyonkuru, 2005).

According to the Chinese researchers Li et al. (2003) only six of 26 top business schools offered business venturing programs and five focused on entrepreneurship modules. On the other hand, at the National University of Singapore, entrepreneurship courses are complemented by new initiatives like business plan competitions, business incubators for professors and students embarking on start-ups, regular forums that bring entrepreneurs onto campus, and a venture support fund to seed university spin-offs (Shanmugaratnam, 2004). In Latin America, entrepreneurship courses are offered at universities in Colombia, Argentina, Mexico, Honduras, Panama, Costa Rica, Peru and Brazil. However, there is very little reliable information available (Postigo and Tamborini, 2002).

It little is known about entrepreneurship education in Africa. However, African universities recognize that the educational system in Africa is lagging behind in terms of offering entrepreneurship education into the higher education curricula, so very few universities offer specific programs in entrepreneurship and have made entrepreneurship an integral part of the African education system (Niyonkuru, 2005). It is evident from Jesselyn Co and Mitchell (2005) findings that entrepreneurship education in South Africa is at its early stages even though some of the higher education institutions have been involved since the early 1990s. These writers also showed that there is an increased commitment by schools to academic offerings, research and outreach activities related to entrepreneurship. The results concluded that most higher education institutions and academics are starting to recognize that entrepreneurship is an important subject area to focus on, and that a strong program in entrepreneurship is necessary for an institution to be acknowledged.

## **5. Higher Education in Iran**

Higher education in Iran, like any other countries is considered to be very important in all aspects. Higher education is responsible for developing a scientific base to achieve a dynamic economic status, which relies on knowledge and the promotion of scientific advancements and bridging the scientific gap with developed countries. Currently, there are 1795 higher education institutes in Iran. There are 1200 public universities, which are financed, controlled and supported by the government. However, there are also 595 private often called "free universities" and non-profit institutions active in providing training at undergraduate and graduate levels. Admission to the state universities is based on completion of secondary school and successful placing in the competitive National Entrance Exam (Konkur). All the candidates are given a ranking. Their ranking decides what they study and where, and not their on interest or ability.

According to the latest statistics released by the Ministry of the Science, Research and Technology (MSRT) (2009) there are about 3.4 million students enrolled in higher education

institutions, of which 51.85% were female and 48.15% were male. Table 1 shows the number of students at different higher education levels. Iranian universities graduate almost 750,000 students annually. By early 2000, Iran allocated around %0.4 of its GDP to R&D, which not only ranks it far behind industrialized countries but pretty far from even the world average of %1.4. However, the Iranian government did not reach the preset budget of the %2.5 nor did it meet the 2010 preset deadline.

**Table 1:** Numbers of attendants, degree offered and levels of education in public and private institutions (2007-2008)

Institute Group	Public Institutions		Private Institutions		Total	
	n	%	n	%	n	%
Associate degree	245161	12.51	521721	36.18	766882	22.54
Bachelor of Science and Arts	1560174	79.6	847624	58.78	2407798	70.78
Master of Science and Arts	89521	4.57	57084	3.96	146605	4.31
Medical Doctor (MD)	32139	1.64	11238	.78	42377	1.25
Doctor of Philosophy (PhD)	32884	1.68	4306	.30	27190	.80
<b>Total</b>	<b>1959879</b>	<b>100</b>	<b>1441973</b>	<b>100</b>	<b>3401852</b>	<b>100</b>

Source: MSRT, 2009

Higher education in Iran today suffers from an overall lack of quality. Much of this can be traced back to ineffective management of resources human as well as natural, increased enrollments, a shortage of technology, outmoded and traditional instructional methods largely based on memorization, and improper incentives for teachers and students. Today, with the increased speed of information and telecommunication technology, many changes have occurred in society. However, Iran's old and experienced higher educational system doesn't have the capacity to meet current societal needs. It faces numerous challenges and obstacles, and needs reform and transformation pretty quickly (Rasian, 2009).

## 6. Entrepreneurship Education in Iran

At present, based on available authorized statistics it is estimated that about 2.5 million people in Iran are unemployed and 30 percent of them are university graduates. Unemployment rate for college women and girls has increased from 39 percent in 1987 to 54 percent in 2002 (Arasti, 2004). Historically, in Iran, government has been the main source of employment creation, particularly for university graduates. The main strategy of higher education, therefore, was to prepare its clientele for government employment. But in today's world, globalization, market liberalization, population growth, and government downsizing have caused a shift in the market place towards the business sector (Hosseini et al. 2008; Saketi, 2001). Most national researchers believe that the inconsistency of higher education with the needs of changing marketplace is a main reason of unemployment growth rate among higher education graduates (Hosseini et al., 2008). Meanwhile, international organizations such as Organization For Economic Cooperation & Development (OECD) and World Bank and various national organizations believe that nurturing entrepreneurship as a planned intervention in the social system, including higher education, can assist governments to foster economic development and employment (Ahmadpour-e- daryani, 2003).

In recent decades Iran has witnessed and shown an increasing interest in various entrepreneurship fields, in higher educational settings, policy making and business. The government is spending more than ever to promote and encourage entrepreneurship and innovation. Accordingly, measures and mechanisms have been proposed to develop entrepreneurship in the public and private sectors as well as universities.

Government policy makers started paying attention to entrepreneurship as a possible solution for solving problem of increasing unemployment rates in 2000, via the Third Economic and Social

Development Program (2000-2005). In the Third Development Plan, a comprehensive program was established regarding entrepreneurship development in universities, it's called KARAD. This program was implemented in 2003 at 12 Iranian universities. This plan allocated budgets for entrepreneurship research and education, promotion of an entrepreneurial spirit and culture, development and creation of jobs and welfare and support institutions such as entrepreneurship centers, science and technology parks and incubator facilities in universities and introducing entrepreneurship courses into undergraduate education by the Ministry for Sciences, Research and Technology. The Fourth Development Plan (2005-2009) ended with the trend and aimed even more weight to entrepreneurship development through education, promotion, and direct and indirect support initiatives. In this plan, entrepreneurship rose to a new level of importance in public policy. Another rise in the status of the next plan currently under development is expected. During the fourth plan, the KARAD program gained great jump (Keyhani and Jafari Moghadam, 2008).

## **6.1. Current Events in Entrepreneurship Education**

### **6.1.1. Innovation and Entrepreneurship Development Centers**

Currently, 106 public universities have established Innovation and Entrepreneurship Development Centers in Iran. These Centers offer various courses for people who want to start up an entrepreneurial business or company. Several universities and institutions are established to offer courses in entrepreneurship education. However, only few elective courses are designed and offered on a regular basis. Such as "Introduction to entrepreneurship" and "Fundamentals of entrepreneurship management". The purpose of these two courses is to introduce students to issues related to principles and skills required for preparing a business plan and starting up and managing a business.

### **6.1.2. Science and Technology Park and Business Incubator**

The first Technology Park was established in USA during 1950s. There are more than 1000 science parks around the world now, which most of them are linked with universities. A science and technology park attempts to encourage the development of entrepreneurship through the establishment of knowledge-based industries. The main aim of science and technology parks is joining the economic and intellectual resources in the region in which the park is established in one unit, in order to improve and enhance the existing companies' business conditions and to concentrate knowledge in one place (Ivan et al. 2009). Therefore, Iran has established its first Science and Technology Park in Isfahan around 1997. Currently, Iran has 22 Science and Technology Parks. Also, there are 76 incubators at public universities (MSRT, 2009c) and institutions and 50 incubators are active at private universities. First time business incubators are considered in Iran was 1980 decade.

The aim of Iranian higher education institutions in establishing incubators was to prepare the ground for attracting and supporting entrepreneurs, especially the top university graduates in their specialized fields through helping them to establish firms, providing low cost services, training, advice and rental space to the entrepreneur who provides low risk for starting up and accomplishing financial achievement. The idea behind the so called incubator movement was to establish strong links with industries, R&D centers and universities, bringing about creation and impacting the perception of entrepreneurs as well as their culture. A good incubator has a positive impact on the perception of entrepreneurs, creation of an entrepreneurial culture, strong links with industry, research stations and universities, in both structuring and facilitating accessible resources to achieve and survive in financial markets (Aernoudt, 2004)

### **6.1.3. Bachelors and Master Programs**

The Faculty of Entrepreneurship which was founded in 2007 at Tehran University offers comprehensive entrepreneurship curricula for undergraduate and graduate students. The undergraduate program in Entrepreneurship Management provides students in the field of Small Business Management with knowledge and skills. One of the most important objectives of Small Business Management is providing specialist manpower in private, public sector as well as NGOs. In the

undergraduate course, it is emphasized on the practical aspects more than the theory dimension. Students have to learn some courses in the workshops and real conditions and environment (such as factories). Iran's first ever degree program in Entrepreneurship began in 2004 as a Master's program at the University of Tehran. Due to generous support from the Ministry of Labor, the Ministry of Science, and the Tehran Municipality, and the efforts of a team of Iranian scholars, this degree program has now grown into Iran's first Faculty of Entrepreneurship (Keyhani and Jafari Moghadam, 2008). The master programs in Entrepreneurship Management provide students with three fields: 1) Business Creation, 2) Organizational Entrepreneurship and 3) Public Sector Entrepreneurship (Faculty of Entrepreneurship, Tehran University, 2009).

#### **6.1.4. Scientific Publications**

Scientific publications in entrepreneurship are growing in Iran. There are more than 30 websites, 20 books and 1000 papers published on the subject of entrepreneurship since its beginning in 1995 (Azizi et al., 2008). Moreover, there are at least two scientific referred journals (Journal of Entrepreneurship Research and Journal of Entrepreneurship Development) are published under the supervision of MSRT.

#### **6.1.5. E-learning (Virtual Students)**

The Faculty of Entrepreneurship at Tehran University offers virtual courses at the undergraduate and master levels. It currently has 605 students taken these courses. The undergraduate program is offered in the field of Small business Management. The master programs in Entrepreneurship Management are offered in the fields of Business Creation, Organizational Entrepreneurship and Public Sector Entrepreneurship. The courses in E-learning and Conventional Education are the same, but in E-learning the content of courses is sent and received via the internet. Students can contact with their teachers through the internet. For this purpose, the specific hours are determined for online contact and answering students' questions. The courses are offered in a web conference (Faculty of Entrepreneurship, Tehran University, 2009).

### **6.2. Challenges for Entrepreneurship Education**

The vast number of challenges facing universities and colleges today can be characterized by uncertain and complex dynamic change. Universities and colleges must meet the demand of stronger self-reliance, increased marketing strategies in an entrepreneurial orientation. All of this allows for greater opportunities but also creates a higher risk factor. The future of higher education institutions must meet these new challenges by cultivating competitive profiles, and utilizing resources to their full potential while maintaining a high standard for the stakeholders and creating new and varied learning processes for themselves. These dynamic challenges create a broad need for every university to focus on entrepreneurship. (Gibb, 2005)

The challenges faced by Iranian higher education today for entrepreneurship education is both internal and external. (Rasian, 2009; Wilson, 2009; Wilson, 2008; Kuratko, 2005; SAPCG, 2008).

#### **6.2.1. Internal Challenges Students**

Presently, the number of universities in Iran is increasing like never before. Obviously, the desire and the trend of adding up to the numbers of higher education institutions has decreased and sacrificed the quality of an Old Iranian higher educational system as well as damaging the quality of a young entrepreneurship education system. More emphasis should be implemented in problem-solving and creative thinking in primary and secondary education pupils. It is worthy to note that Iranian students work very hard and have to pass a tough entrance exam to get qualified for entering to a university. Sadly, many will be unprepared for a job market. They often have no practical and vocational ability (Rasian, 2009). Most students are not interested in their major fields, due to lack of free selection. To

avoid a two year mandatory military services many young males choose any major regardless of their interest. As the result many students major in agriculture who have no farming background. (Rasian, 2009). According to a research conducted by MSRT with forty thousand subjects in 2004, over 20% students were not interested in their majors (Pourshrifi et al., 2004).

### **Curriculum Development**

The purpose and goals of entrepreneurship education are not only based on measurement of the number of start-ups created from universities. Entrepreneurship education is about developing attitudes, behaviors and competencies at the individual level. It is also about the application of those attitudes, skills and abilities that can take many forms during an individual's career, creating a range of long-term benefits to society and the economy. Entrepreneurship and innovation must be deeply integrated in the curriculum to embed a new entrepreneurial spirit and mind-set among students (Wilson, 2008).

In the same path Yaghoubi (2010) stated that the existing curriculum of higher agricultural education has not been successful in developing entrepreneurship skills of graduates. Entrepreneurship courses are offered in stand-alone courses rather than being integrated in the content of courses in majors or disciplines. As mentioned only one course in regarding entrepreneurship is offered at most Iranian universities. It must be taken into consideration that exposure to one course in entrepreneurship does not ensure entrepreneurial orientation or more positive expectations about entrepreneurial abilities and competencies in students (Hosseini et al. 2008). Entrepreneurship courses are also mainly offered in an elective format at universities. In addition, courses are filled with theoretical rather than practical subject matter and student usually object to the instructional methods used because at universities syllabuses are emphasized on theory dimensions and traditional methods of teaching such as classroom lecture. Various studies show that traditional educational methods do not correlate well with the development of entrepreneurial traits and attributes.

### **Entrepreneurship Teachers**

A lack of experienced professionals as faculty members in teaching entrepreneurship education subjects is completely tangible at most Iranian universities. Teachers lack awareness about their lesson plans, objectives, contents and teaching methods in teaching entrepreneurship education. On the other hand, Iranian instructors at the higher education are not paid high salaries. Sayyari stated that the teachers are often hired through personal connections and networking ability rather than their competency (as cited in Rassian, 2009, p.12). As the result, many faculty members are under qualified and out of touch and some with plenty of out dated knowledge and skills.

### **The Technology Application**

Entrepreneurship must recognize and apply technologies in the educational setting. Kurkto (2005) states that in many respects, entrepreneurship education may actually change the educational setting. For example, some universities are applying unique technological applications such as the George Washington University. They developed a software tool entitled, "Prometheus." In addition to offering students and teachers the opportunity to interact via e-mail, bulletin boards and live discussion formats, Prometheus and other course management programs also integrate multimedia options into the course. Students can access a course site, download a posted journal article, watch an instructional video or DVD and return a completed assignment from any Internet connections. Educators can follow up with individualized online coaching and feedback to students. However, there are many challenges and obstacles at Iranian higher education in this field. Arasteh describes them as follows (as cited in Rassian, 2009, p.14):

- A poor infrastructure of equipment, facilities, and services, such as high-speed internet
- Internet, and advanced computer systems;
- Few curriculum designers or faculty members experienced in e-learning;
- Unreliable telecommunication services;



- Students' poor ability of English language; and
- Doubts about open- and equal-access to information and information technology.

### **Research in Entrepreneurship Education**

Entrepreneurship education as an emerging field is growing rapidly worldwide. Thus, researcher and scientists have to seek for the most efficient, pedagogical, methodological and theoretical approaches to teaching and learning entrepreneurship in different settings. In Iran, research in entrepreneurship and entrepreneurship education are weakly developed, basically for the reasons mentioned above. Most research done on the subject of entrepreneurship is focused way too general and unable to generalize the findings to other populations but its own limited circle. Similarly, the lack of empirical research on entrepreneurship education and of entrepreneurship education evaluation to measure the effects of entrepreneurship programs on learning, attitudes and behaviors are important obstacles to improving entrepreneurship education and achieving a rapid progress in the field of entrepreneurship.

### **6.2.2. External Challenges**

#### **Unemployment among University Graduates**

Education encourages development and development encourages employment. But, according to Rahmani and Nazari, few faculties are familiar enough with industrial and service enterprises to offer courses relevant to the job vacancies that exist (as cited in Rassian, 2009, p.13). The most influential factor in Iranian graduates' underemployment is a lack of alignment between their education and the needs of the labor market. Furthermore, the result of a study in agricultural higher education shows that the educational content with the job market needs is not fit (Yaghobi, 2010). However, according to Eshagian and Keshavarz, some external factors, out of higher education's control, play a part, such as: a lack of entrepreneur culture; undeveloped private job-filling enterprises; relatively few job vacancies; and poor labor market planning (as cited in Rassian, 2009, p.13). Today, women make up more than 50 percent of Iranian university students. With more women in school and a later average age of marriage, the birth rate has declined. Nonetheless, women's employment has decreased in the last few decades, due to sex discrimination, especially in industry, management, and high level positions (Rassian, 2009).

#### **Investment and Financial Resources for Entrepreneurship**

In the United States, many universities have entrepreneurship centers and chaired professorships of entrepreneurship funded by external sources. According to research conducted for the Kauffman Foundation, the 400 chairs of entrepreneurship in the United States amount to approximately USD 1 billion (Katz, 2004). In most countries, including Iran, the bulk of the funding for schools and universities comes from governments. Most government funding programs start well after the need presents itself and stops before the programs can have the necessary impact. Financial assistances are dispersed in various organizations in Iran and to access them. The entrepreneurs and graduates should pass the expensive and bureaucratic path that enhances transaction cost strongly. Studies of different countries' experiences show that assistance in providing financial resources mostly is a main concern of supporting programs (Taghiyareh and Nouri Hekmat, 2004). Banks which provide grant loans to small enterprises and graduates have a complex and time-consuming disincline in Iran and these enterprises and graduates are not able to provide required security documents for the banks. In addition, interest rates are pretty high.

#### **Rules and Regulations**

According the World Bank report (2010) Iran is ranked 137<sup>th</sup> on the ease of doing business among 183 countries. This index means the regulatory environment is conducive to the operation of business. One of the most important reasons for such a ranking is a bureaucratic system (too many rules and regulations, and too much paperwork). Bureaucracy in Iran is often a very complicated process with endless steps. Regulations, rules and policies change rapidly and are more complicated. The absence of

an appropriate entrepreneurial climate, the lack of required infrastructure facilities, and the lack of access to relevant technology hinder rapid development in entrepreneurship and business. Therefore, doing business in Iran is an extremely difficult proposition.

Government intervention in market and existence of parallel supervision systems mean high risking business activities in Iran (Faghih, 2009). After the Islamic Revolution in 1979, planning and decision-making were centralized. Yet, there exist many stakeholder organizations, which do not necessary coordinate their work, such as: the MSRT; the MHTME; the Ministry of Teaching and Training; the Ministry of Labor and Social Affairs, Parliament of the Islamic Republic of Iran and other organizations (Soltani, as cited in Rassian, 2009, p.13). Arasteh This rapid growth of authority reduces transparency and puts managers under stress and doubt (Arasteh, as cited in Rassian, 2009, p.13).

### **University-Industry Gap**

Rasian (2009) stated that according to UNESCO, higher education has three functions: knowledge production (research), knowledge transfer (education), and knowledge distribution (service). Iran's educational system is based on knowledge transfer, with little concern for research and services. One of the most important challenges in this respect is the lack of demand from industry. About 70 percent of industry is state-run, with the private sector so undeveloped and weak it cannot afford to invest on research. The state-run sector fulfills its needs by purchasing technical information from developed countries with its oil profits. In such a situation, there is no need for R&D as all needs can be met from outside sources.

Unfortunately, the cooperation between the business world and universities is poorly developed. As a matter of fact, such practices are not really encouraged. Part of the problem is keeping down the ailing state of industry, unable to act as a viable partner, while cooperation with the Small and Medium Enterprise (SME) community is extremely weak. More fundamentally, however, is the conclusion that universities and businesses essentially operate in different worlds: one concerned with the short-term, day-to-day business survival (small enterprises); the other more concerned with the longer-term - the development and delivery of education (the university community) (Gribben, 2006). In addition, due to a lack of the mutual links between university and industries, the higher education is not coordinated with the needs of changing marketplace and people; this is an important element of unemployment as well as prosperities rate among higher education graduates.

### **Entrepreneurship Culture**

The culture of a society is a major force defining the thoughts and activities of its people. Culture is of a set of shared values and beliefs that in turn determine socially accepted behaviors (Hofstede, 1980). However, not a single study has been directed toward researching the culture aspect of entrepreneurship in Iran. Therefore, cultural values are also likely to determine "the degree to which a society considers entrepreneurial behaviors, such as risk taking and independent thinking, to be desirable" (Hayton et al., 2002, p. 33). Iranian culture advocates individual works, or family aggregations. By contrast, developed countries' culture supports teamwork and venture investing in ideas that are most likely to win (Rasian, 2009). Entrepreneurial culture and entrepreneurship education have a mutual relationship and support each other. On the one hand, entrepreneurship education can help promote an entrepreneurial and innovative culture by changing mindsets and providing the necessary skills. On the other hand, entrepreneurial culture can provide the path of development and improvement of entrepreneurship education.

## **7. Recommendations**

According to Wilson (2009) there is no "one size fits all" solution for entrepreneurship education for the world. The challenges and opportunities for entrepreneurship vary inconsiderably in different parts of the world as well as for different parts of the educational systems. It is not proper to bring in models

from other countries without modification and adaptation. Local context must be taken into account in devising and tailoring a set of programs and initiatives relevant for each area (**Wilson, 2009**). The research suggests that a transition from the current to a more desirable situation could use the following policies:

- Entrepreneurship development should be considered as an important and essential factor by all institutions both local and public organizations. The field of entrepreneurship education is still relatively young, and therefore, it is necessary that public and private support encourages and continues entrepreneurship is embedded in a sustainable and essential manner in schools and universities as well as through informal education systems (Wilson, 2009).
- It is pretty obvious that Iran needs to invest in the training and development of entrepreneurship human resources. Recommendations such as hiring more professional teachers in the field of entrepreneurship, providing training for entrepreneurs and other practitioners to become effective educators and ensuring opportunities (sabbaticals, if necessary) for faculty members to engage in entrepreneurial activities outside of the country. Furthermore, in-service training, training programs, continuing professional education, and workshops for teachers of entrepreneurship should be supported in all Provinces and even Townships. Programs should be developed into the direction where entrepreneurship education has its place, motivation and encouragement for the teachers to train students and potential entrepreneurs.
- Entrepreneurial culture should nurture in universities and foster students' entrepreneurial spirit in this way. It is universities' social responsibility to offer entrepreneurship education and encourage college students to start up their own businesses. Higher education should center on nurturing entrepreneurial spirit of students prepared to take risks and ready to start up their own businesses. In this way, college graduates encouraged to become job creators rather than job seekers. The government should develop, support and deliver appropriate policies that foster entrepreneurship culture. Traditionally, in Iran's economic culture, the government has the most fundamental role in employing university graduates, and most of them have been employed in administrative affairs rather than production activities (Salehi Amiri et al., 2009).
- Documentary films, exhibitions, festivals, as well as mass media, and publications regarding successful Iranian entrepreneurs can play a significant role in enhancing entrepreneurship culture and sharing experiences to motivate future entrepreneurs.
- Business values and ethics on families, schools and universities as the core center of business formation should be reinforced (Ahmadpour daryani, 2003)
- According to Bennett (2006) passive or traditional methods such as lectures are less effective in influencing entrepreneurial attributes. However, active methods such as business plan creation, internships, guest speakers (entrepreneurs) and project works is said to be more appropriate for nurturing entrepreneurial attributes among participants. The use of interactive teaching methods in the classroom should be encouraged. Teachers can practice teaching methods that are related to the real work situation. Institutions should develop the proper incentives, assessment, rewards and recognition to encourage educators to try these approaches.
- It is especially essential for teachers to use resource persons method of teaching in their classrooms.
- Effective cooperation and mutual and interactive relationship between universities, entrepreneurs and industry should be established and improved. The relative government agencies should work with institutions of higher education to establish R&D institutions for entrepreneurship to study latest developments of entrepreneurship education both at home

and abroad in order to provide the government with consultant reports in developing practical policies and improving the welfare of the country.

- Business start-up training and support should be provided for graduates who want to start their own businesses.
- Easing on commitments and law stages for rendering bank loans with low interests to provide financial assistance for new corporations, entrepreneurs, graduates and small enterprises. Founding E-business, E-banking, and micro-financing and micro-insurance could also facilitate startup financing.
- Currently there is no evaluation of entrepreneurship education programs. Entrepreneurship education programs need to be continuously monitored and evaluated to ensure that their objectives are met (De Faoite et al., 2003). It will be essential for evaluation studies to measure the both short term and long term effects of entrepreneurship courses by employing pretest–post-test control group quasi-experimental designs.
- Entrepreneurship needs to be embedded in the mainstream academic curricula to enable students to receive education of entrepreneurial spirit and entrepreneurial skills once they get into universities. In addition, courses should incorporate both theoretical and practical elements. Entrepreneurship education should be accessible for all students (Business and non-business students). The number of entrepreneurship courses and the number of schools and universities offering entrepreneurship courses should increase and available to a broader group of students. Integrating entrepreneurship into education and providing greater access are the first and most important steps for building an innovative culture and creating a new wave of entrepreneurs, entrepreneurial individuals and organizations (Wilson, 2009).

European Commission (2008) stated higher education institutions should offer a diverse range of entrepreneurship courses, rather than settling on a common course for all kinds of students. Therefore, it is highly recommended that content of teaching should be changed for students in business and in non-business studies. In terms of specific content, programs and courses should be adapted for different target audiences.

- Science and technology parks and business incubators seem to be very relevant to the present SME development needs in Iran (OCED, 2003). Therefore, it is important to promote and establish such organizations. Science and technology park closes up the gap between the higher education system and various business markets and industries.

## 8. Conclusion

Based on the reviewed literature of this study, it can be concluded that entrepreneurship education, especially in higher education institutions has gained much importance and acknowledgement over the past decade at both developed and developing countries, including Iran. However, the field is still evolving and many of its defects and weaknesses need to be addressed. Review of literatures indicates a high provision rate of entrepreneurship education at American and European universities compared to the other countries. This gap can be explained in such a way that educational system and academic institutions of these countries recognized the importance of entrepreneurship and its effect on economic growth earlier contrasted to developing countries. Iran is a developing country with potential for widespread growth. However, such potential growth depends on how well the country can utilize and promote entrepreneurship, particularly among students, youth and gifted. Initial work has been successful and promising, while the government and universities have been in the forefront to promote and participate in entrepreneurship.

Iran has the unique opportunity in terms of high literacy rate, available resources and young population to learn from entrepreneurship models and experiences from the world. Therefore, integrating and focusing on the most relevant and high-quality practices into its higher education institutions. Iranian government agents should make a long-term commitment and investment on entrepreneurship education. Unfortunately, most programs start up then stops a few years later.

Sustainability as well as evaluation is the key with any programs. Finally, Iran's competitiveness, innovation and economic growth depend on being able to produce future leaders with the skills and attitudes to be entrepreneurial in their professional lives, whether by creating their own companies or innovating in larger organizations. Perhaps, entrepreneurship education is the first and arguably the most important step for embedding an innovative culture in Iran.

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