

Entrepreneurship Education: State of the Art

Educación emprendedora: Estado del arte

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Summary

Job uncertainty and ambiguity is a reality in many current societies, therefore, the idea of self-employment has taken a more active role, not only out of necessity, but also because it brings innovation and development to societies. In view of this situation, the following question arises: how can we strengthen the entrepreneurial spirit of our students? This article has the objective to collect theoretical information of the state of the art on entrepreneurship education: what it has been, what it is, and what can it be, in order to present the current condition of the topic, both in the psychological and pedagogical field. To achieve this objective, information from 108 research sources, mainly from scientific articles and books was collected, concluding that, although generally, entrepreneurship education has significantly contributed to the creation of businesses, developing countries, specifically, those in Latin America, still require extra effort to fully implement entrepreneurship topic in the curriculums, particularly because of challenges such as political instability, technology and international competition.

Keywords: Education, Entrepreneurship, Latin America, Psychology, Pedagogy,

Resumen

La incertidumbre y ambigüedad en el empleo es una realidad en muchas sociedades actuales, por lo cual la idea de auto emplearse ha comenzado a tomar un rol más activo, no solo por necesidad, sino por los prospectos que trae de innovación y mejoría a las sociedades. Ante esta situación social nos asalta la pregunta: ¿Cómo podemos potenciar el espíritu emprendedor en nuestros estudiantes? El artículo tiene como objetivo recopilar información teórica del estado del arte sobre la educación emprendedora; lo que ha sido, es, y puede ser, con la finalidad de presentar la actualidad sobre el tema, tanto en el campo psicológico como en el campo pedagógico. Para lograr este objetivo, se recopiló información proveniente de 108 fuentes investigativas,

refiriéndose a libros y artículos de revista, concluyendo que, a pesar de que a nivel general la educación emprendedora ha contribuido significativamente a su entorno y la producción de empresas, países tercermundistas o subdesarrollados, específicamente los de Latinoamérica, aun requieren esfuerzo extra para implementar en su cabalidad el tema de emprendimiento a nivel académico, particularmente, por desafíos como inestabilidad política, tecnología y competencia a nivel internacional.

Palabras clave: Educación, Emprendimiento, Latinoamérica, Psicología, Pedagogía

Introduction

Entrepreneurship has been always present throughout the history of humanity since it is inherent to it. During the last decades, this concept has become very important due to the need to overcome constant and increasing economic problems. That said, education of entrepreneurial competencies becomes an essential element for the adaptability of new labor markets. Since entrepreneurship is a great area of research, the interest in seeing how it can be promoted through educational programs oriented to this goal: entrepreneurship education springs.

The phenomenon of entrepreneurship is an area of increasing development in the scientific research field. The academic interest in entrepreneurship is based on the evidence about its contribution to the economic growth, rejuvenation of social-productive tissues, relaunch of regional spaces, dynamization of innovative process and to the creation of new jobs. (Kantis, Ishida & Komori, 2002).

This study is aimed at collecting a theoretical review and a review of scientific articles that show the current reality of entrepreneurship education, as well as the relevance of psychology in this field and the different strategies offered by this science to strengthen skills and competencies required by the education community, when deciding to undertake. In addition, it tries to recall the complexity of the education phenomenon, as well as the application of several learning strategies that strengthen the students' entrepreneurial competencies and skills. To achieve this objective, information from 107 research sources, such as books and journals, was collected to evaluate the current condition of the education in Latin American countries, sources less than 20 years old were used and programs researched were verified based on such sources to corroborate their function and validity. The databases used to consult the literature were ProQuest, Scopus, in addition to reports or books prepared by governmental agencies of the Ministries of Education, the European Commission and GEM.

The articles were organized according to the topics described in this article: psychological theories on entrepreneurship, student profile and

entrepreneurial attitudes, education strategies focused on entrepreneurship, current role of educational institutions in entrepreneurship, future management of entrepreneurship education, current entrepreneurship education in Latin America. Conclusions were reached based on the evaluation of the most recent articles and they were compared with the scientific literature that forecasts success in setting out and managing companies, in order to build a picture on the current entrepreneurship education according to its relationship with scientific literature and with realities that currently represents.

Argument

Theoretical Background.

Based on the different reviews of bibliometric studies (among others, Busenitz et al., 2003; Cornelius, Landström, & Persson, 2006; Dery & Toulouse, 1994; Ferreira, Nuno & Rui, 2015; Filion, 1997; Landström, Harirchi & Åström, 2012; Murphy, Liao, & Welsch, 2006), a picture of the different entrepreneurship-related theories that has been developed in three great approaches or theoretical perspectives (Sánchez, 2011a): economics, psychology and sociology, can be built. Based on our understanding, the field of entrepreneurship would be situated in the intersection of this three perspectives.

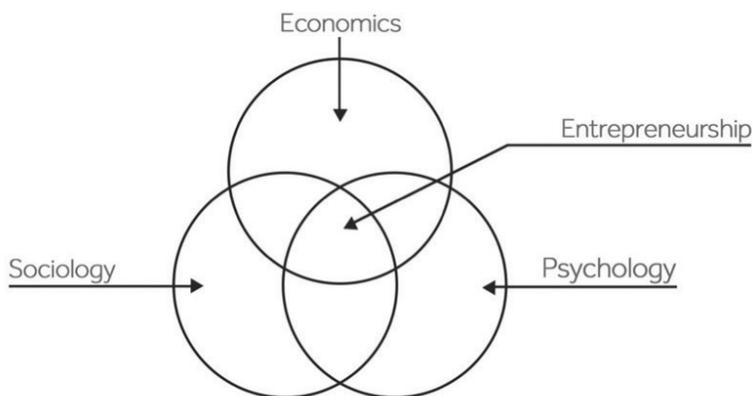


Figure 1. Conceptual Framework of Entrepreneurship as a Knowledge Field. Source: Sánchez 2011,

p. 429

To understand the relevance of the Entrepreneurship Education and the contribution of Psychology, it is essential to emphasize the importance of entrepreneurship in society. Uriarte and Martín (2007), regarding the development of new enterprises, consider that encouraging young people to start their own business and to create their own business is key for the economic growth of the country and institutions. In this regard, psychology, as stated by these authors, should delve into the study of economic behaviors of entrepreneurs, as well as into reasons, cognitions, attitudes, values and all those underlying psychological characteristics so that in certain population and given some fixed objective conditions, they decide to work by themselves assuming high economic risks when managing an organization.

Moreover, Sánchez (2010) who considers that during the last decades, states that there has been a considerable increase, both in volume and in sophistication, of studies exploring aspects related to the entrepreneurship and to the creation of businesses. Principally, this is due to the fact that small- and medium-sized companies have proved to be important for the economy, apart from being the main agents of job and economic growth of some countries. Much of this effort to understand the entrepreneurship phenomenon has been focused on the psychological characteristics of people who undertake these adventures.

This is where consolidation of learning strategies and contribution of psychology to this field become relevant. The psychological approaches on entrepreneurship have been recently revitalized due to the future importance of small entrepreneurs and to the fact that the study is situated in the limit between work psychology (personality, work activities, etc.), organizational psychology (founders of the organization that have a great influence on it), and market psychology (economic activities in the market). Essentially, all the aspects of psychology are involved when studying the field of entrepreneurship (Rauch & Frese, 2007).

Taking into account the foregoing, it is important to highlight the profile of the entrepreneur and the advances of this profile based on the competencies required for university students to achieve self-employment. These competencies tend to be strengthened through different university programs. It is important to point out the contribution of psychology to this whole strengthening process necessary to promote entrepreneurial behavior in young university students.

An important aspect that must be kept in mind when talking about entrepreneurship education is that it is systematically integrated in the education field as a mission. The academic institutions are created to serve society, and three missions were supported for this objective: education through teaching, research and the third one, which is of our greatest interest, contribution to the economic development through technology of enterprises or the creation of them by students and teachers.

When talking about the third mission, it implies several conceptual foundations: 1) development of cooperation activities between university and public and private agents; 2) social and community commitment to the solution of problems around (Bueno & Casani, 2007), and 3) development of entrepreneurial universities (Clark, 1998) and (Etzkowitz, 2004). This role of the university must be related directly to specific realities of each society; its approaches agree that it has openness towards its social reality and that it compares the idea of an ivory tower, above or isolated from social problems (Vera, Amaru & González, 2013).

Entrepreneurial Profile Approach from Psychological Theories

As psychology has grown in the scientific community, particularly, according to its interdisciplinary integration, its group of prevalent theories upon the identification of entrepreneurial attitudes has contributed: Theory of Personality Traits, Cognitive Theory, Theory of Reasoned Action, Theory

of Planned Behavior, among others, are the center of the pillar of the field. In short:

Theory of Personality Traits: It is based on the assumption that entrepreneurs have values in personality that differ from non-entrepreneurs. Although it is typical in entrepreneurship, its usefulness has been discussed throughout time. Cromie (2000) and Hisrich (2000), for example, have found that personality does not make a reliable difference between entrepreneurs and non-entrepreneurs, and it also shows a small percentage in variance for success. However, a study conducted by Sánchez and Yurrebaso (2005) found that personal characteristics work as predictors of entrepreneurial intention, and it also explains great part of its variance. Particularly, self-efficiency and internal locus of control significantly impact the entrepreneurial intention of students (Sesen, 2013).

Cognitive Theory: It supposes that entrepreneurs have a knowledge structure used to make evaluations, judgements or decisions that involves the evaluation of opportunities, creation of businesses and growth of them” (Mitchell et al., 2002; Sánchez, 2011a).

Theory of Reasoned Action: It considers that the people’s behavior is greatly supported by rational states using available information in a systematic way to make an evaluative judgment on the consequences. Basically, it conceptualizes the intention as a precursor to action, although it does not try to establish that intention always leads to an action; it does not have a perfect relationship (Gallurt Plá, 2010). The level of intention, according to the theory, depend on the attitude (how the person evaluates the action) and the subjective norm (how the person perceives it according to the evaluation of other significant elements).

Theory of Planned Behavior: It is proposed by Ajzen (1991), and reviews the Theory of Reasoned Action, keeping the attitude and subjective norm as essential elements for the entrepreneurial action, but adding control

perceived, thereby creating a more complete theory, which corrects the limitations of the previous theory about behavior and lack of control.

In this sphere, a profile formed by several influential factors, such as personality, social support, economic systems, culture and values, is being created. Many researchers have found that personality traits such as high levels of self-efficacy, internal locus of control and proactivity significantly influence the taking of entrepreneurial action, in addition to show commitment to their activities (Gurel, Altinay, & Daniele 2010; Iakovleva, Kolvereid & Stephan 2011; Koh 1996; Mauer, Neergard, & Kirketerp 2009; Prabhu & Poulouse 2012). However, the action to undertake cannot be only explained according to personality, but there is a cognitive factor involved in the entrepreneurial attitude. In fact, studies have confirmed that individual beliefs and values influence the entrepreneurial behavior (Krueger & Brazeal 1994; Krueger & Carsrud 1993). This set of traits, values and cognitions probably cause people to start their own business (Learned 1992), along with the sociocultural background that works as a stimulating or motivating element (Mueller & Thomas 2001). In other words, an entrepreneur could be an interaction of personal factors: self-efficacy, internal locus of control and proactivity; and its sociocultural background: attitude, control perceived, subjective norm and reliability.

Student Profile and Entrepreneurial Attitudes

According to the theory of planned behavior, attitudes are precursors to intentions, which precede behavior (Ajzen, 1991). This behavior component is about predispositions and intentions to act in a particular way towards an event (Shaver, 1987). Shapero and Sokol (1982) suggest that these attitudes derive from the entrepreneurial intention. From this, which attitudes can be associated with entrepreneurship and education, in a way that allows creating an entrepreneurial profile in students?

Currently, the behavioral values in the entrepreneurial student variable are not complete, however, generally, the values generated in the general field of entrepreneurs are used: need for achievement, locus of control, availability to take risks, tolerance towards ambiguity, innovation and self-confidence. That is, when establishing an entrepreneurial profile in this population, the assumption that they have these characteristics is used. Scientific studies have delved into and showed in an empirical way the prevalence of some attitudes in the academic environment. Hatten and Ruhland (1995), for example, they found that students, who have internal locus of control, developed positive attitudes towards entrepreneurship after participating in small business initiative programs in several universities.

Upon determining the demographic dynamics in the entrepreneurial attitude, it was found that men are twice more prone than women to start business, and in part, it could be due to the development of attitudes in previous experiences. The prevalence of research has indicated that women (Hisrich & Brush, 1987; Carter, 2000; Thomas, 2001) and minorities (Kourilsky & Esfandiari, 1997; Heilman & Chen, 2003) face obstacles in entrepreneurial development, such as little experience, limited resources and few mentors. Based on the idea that the entrepreneurial process is experiential in nature (Robinson, Stimpson, Huefner & Hunt, 1991; Sullivan, 2000; Minniti & Bygrave, 2003; Politis, 2005), it could be understand why there is a marginal difference between demographic groups and entrepreneurial attitude.

In the education field, the need to establish programs favoring events and environments that encourage entrepreneurial attitudes could act as a change agent to counteract this problem, since the entrepreneurial attitudes are a series of values that feed themselves on situations that foster them (Robinson, Stimpson, Huefner, & Hunt, 1991; Mitra & Matlay, 2004), and that their positive feedback increases entrepreneurial expectations (Gatewood, Shaver, Power & Gartner, 2002).

In addition to the foregoing, contexts encouraging students in entrepreneurial attitudes can be identified. Many young adults, particularly,

between ages 25 and 34, are interested in the creation of businesses and are more likely to undertake entrepreneurial activities (Minniti, Allen & Langowitz., 2005), this a sensitive period where we can capitalized on this attitude by using the range of interests as a boost to accelerate the integration of such values in the individual.

How does entrepreneurship education can be promoted in professors and students?

One of the greatest challenges of the education system is to establish the suitable mechanisms for innovation and entrepreneurship to be considered important in the education process in all levels of teaching; in addition to promoting teacher training in methodologies that allow the development of innovation in teaching and learning processes.

The specific challenge of entrepreneurship education is to be able to turn ideas into action. Traditional methods, such as readings, review of literature, exams, among others, do not activate entrepreneurship (Gibb, 2002; Sogunro, 2004). A study found that they even inhibit the development of entrepreneurial attitudes and competencies (Kirby, 2002). Therefore, when adjusting other techniques to measure learning based on competencies, not only a situation comprising scientific knowledge, but also that promotes creativity of thinking, effort culture, entrepreneurship, decision making, teamwork, analysis and solution of problems, communication, creativity, innovation during the promotion of the education system must be considered in order to have entrepreneurial citizens who generate a social and economic impact on the future of the country.

To this end, it is necessary the use of effective strategies that clearly show the significant learning and that are focused on experiential learning, on knowledge building in real contexts, on the development of reflective and critical capacities and on the high level thinking, as well as on the participation in authentic social practices of the community according to

Díaz (2003) and that can be related to the strengthening of competencies of an entrepreneurial person. Education policies must be focused on stimulating entrepreneurial attitudes through new ways of teaching and learning from primary education, in addition to paying particular attention to secondary education. This requires effort of headships and teacher training to ensure that students have opportunities to live experiences of practical entrepreneurship in schools.

Teachers play an important role: they are learning facilitators and multipliers of ideas and help students to achieve results in entrepreneurship-related learning like knowledge, capacities and attitudes. As a minimum, every teacher must have access during their career to training in key topics and methods related to entrepreneurial learning and entrepreneurship education. Entrepreneurial competencies require active methods to involve students in creativity and innovation.

Another very important factor is the fact that entrepreneurial competencies and attitudes can only be acquired or built through practical learning experiences of real life. These experiences can be integrated in all the subjects of the curricular program. Teachers and the school could not achieve these objectives unless they work in cooperation and association and close relationship with the community.

To achieve the foregoing, it is necessary a good pre-service education of teachers, so that they inspire their students from the beginning of their professional career and training programs with strategies and entrepreneurship view. Entrepreneurship education can be integrated as a horizontal approach throughout the study program using contemporary teaching approaches as for example:

Learning focused on authentic problem solution: It comprises the presentation of real situations or authentic simulations linked to the application or exercise of a field of knowledge or professional practice (given the case of higher education), in which the student must analyze

the situation and choose or build one or several viable alternatives of solution. For some authors, it includes learning through analysis and case solution, strategies of simulation and games; it also has a highly investigative approach.

Project-based methodology: It proposes to prepare projects as a general school approach; plans that are carried out from the school planning in order to achieve a unique service or product through a series of tasks and the effective use of resources. The approach of projects can comprise the curriculum and learning together, but the important thing is that it is organized with activities from an experiential perspective, in which the student learns through personal, active and direct experience in order to strengthen and assimilate cognitive learning.

Cooperative teamwork: It is based on the educational use of small groups in order to optimize learning and that of other members (Johnson, Johnson, & Smith, 1991a). According to Lillo, (2013) it is important to emphasize that learning that this method is trying to generate does not necessarily occur naturally when giving an instruction or tasks to a group of students, since there must be an intentionality that generate the desired or planned learning through teamwork. For cooperation, five important elements must be ensured (Yániz & Villardón, 2006): positive interdependence, individual and social responsibility, interaction, social skills and small group skills, and self-evaluation of the group process.

The development of great quality programs for professional development is essential. To that end, it is necessary a school where the entrepreneurial spirit is valued with the support of an efficient management team. Entrepreneurial learning networks to ensure quality continuity and to share experiences, for example: co-learning between teachers and students, where the student becomes author of its learning and the teacher is a mediator or catalyst (Fiet, 2000b). However, their effectivity is related to how integrated these education pillars are. In principle, everyone is able to undertake if they have the opportunity to be assertive, creative or innovative; all of them can

be achieved in a classroom (Fiet, 2000b). To achieve this objective, it is necessary to create an environment that allows innovation in training and practice of teachers, set of advanced evaluation methods and guaranteed quality methods for entrepreneurship education teaching and, as an important point: discuss, reflect and evaluate its learning programs with respect to methods and knowledge, how do you learn what you learnt?

What role educational institutions play in entrepreneurship?

The entrepreneurship education is a reality in constant progress. It contributes to the construction of a culture (starting with the youngest people and children). Society is benefited by fostering these entrepreneurial attitudes and capacities, even beyond the application of them in new entrepreneurial initiatives. This occurs in the European Union and strongly starts in Latin America.

In fact, entrepreneurship education has been a priority in universities (Matlay, 2008; Busenitz et al., 2003; Hannon, 2006; Heinonen & Poikkijoki, 2006; Klein and Bullock, 2006; Kuratko, 2005), and some studies found a significant relationship between entrepreneurship programs and the entrepreneurial intention in students (Gupta, Turban, Wasti, & Sikdar, 2009; Guerrero, Rialp, & Urbano, 2008; De Pillis & Reardon, 2007; Fayolle, Gailly, & Lassa-Clerc, 2006; Sanchez, 2013; Zhao, Seibert, & Hills, 2005).

An academic entrepreneurship program could be defined as any educational program or process used to develop entrepreneurial attitudes, skills and competencies in order to develop qualities required to create new businesses (Fayolle et al., 2006). Generally, the current entrepreneurship education is categorized in three different types:

Teaching entrepreneurship: teach general knowledge of concepts related to entrepreneurship (Kuip & Verheul, 2003; O'Connor, 2013).

Teaching to undertake: Theoretical and practical approach to provide entrepreneurial knowledge and skills (Heinonen & Hytti, 2010; Scott, Rosa, & Klandt, 1998).

Teaching through entrepreneurship (Action-based): Method based on the experimental process, where potential entrepreneurs learn directly through entrepreneurial experiences (Kyrö, 2005).

In addition to them, Liñán (2004) proposed different types of entrepreneurship education programs:

Education to make aware about entrepreneurship: Program about delivering knowledge of entrepreneurship and influencing attitudes towards entrepreneurial intentions.

Education for Start-Up: Program about guiding people, who already have business ideas, to solve practical problems and foster them to the Start-Up phase.

Education for entrepreneurial dynamism: Program aimed at promoting people already entrepreneurs and who want to incorporate dynamic plans after the Start-Up phase.

Continuous education for entrepreneurs: Continuous learning programs for entrepreneurs who have started successfully business and have some experience.

Following the same line, academic institutions have created programs or courses based on these categories, mainly, on practical education (Action-based), which has had greater focus on the entrepreneurial literature due to its experiential nature (Henry, Hill & Leitch, 2005; Lackéus, Lundqvist, Williams, 2013; Rasmussen & Sörheim, 2006), and consequently, its definition has continued being expanded (Lackéus et al., 2013; Lackéus & Williams Middleton, 2015; Lackéus, 2013).

Some examples of good practices in entrepreneurship programs are described below:

Finland, University of Jyväskylä: introduction course to Participatory Citizenship and Entrepreneurship for Primary Education Teachers.

Belgium, School of Education of Louvain: project and initiatives to improve the creative and entrepreneurial teacher practices.

United Kingdom, St. Mary's College: Graduate program in teacher training that promotes entrepreneurship education.

United States of America: entrepreneurial learning program, education in economics, profile based on work.

Spain, Princess of Girona Foundation: course titled Entrepreneurial Talent Development in which more than 300 schools participate.

Spain Ashoka: Changemaker schools, educational innovation project to understand the educational ecosystem (teacher training, learning spaces, methodology, school culture, participation of/in the community, evaluation).

An objective more related to the idea of teaching entrepreneurship is the development of Entrepreneurial Universities. Focused on the entrepreneurial idea, they try to work as education centers that promote these attitudes, in addition to working as business incubators, providing students with new ideas, competencies and ability to think in an entrepreneurial way when facing social demands. Traditionally, institutions are focused on the research field and on teaching; entrepreneurial universities see a third approach: marketing of new knowledge for economic development (Etzkowitz, Webster, Gebhardt, Brance & Cantisano 2000). In this regard, universities have an important role in educating people who are potential entrepreneurs, taking the lead in developing abilities to make decisions intuitively, autonomy, networking, initiative-taking skills, identification of opportunities, creativity, strategic thinking, self-efficacy, management of unpredictable situations and attitudes and ways of thinking, feeling, communicating, organizing and learning of entrepreneurs (The Entrepreneurial University: From concept to action, 2013).

Therefore, one of the challenges of the education system is to favor self-employment-related preconditions. This re-orientation of the education

process can lead to the use of education institutions as business incubators, a useful tool to start new businesses, spin-offs and to build connections with industries (EC/OECD, 2012), involving students in training. Table 1 shows some characteristics that a university must have to be considered entrepreneurial:

Table 1.

Characteristics of entrepreneurial universities according to the European Commission (2012), Thorsp & Goldstein (2010) and Maribel Guerrero et al. (2015).

European Commission and OECD LEED Forum	Holden Thorsp and Buck Goldstein	Maribel Guerrero et al.
1. Leadership and governance	1. Recognize that education of liberal arts has contributed to the American innovation	1. Organizational adaptability to environmental changes (Clark, 1998)
2. Organizational training of people and incentives	2. Feed on big problems	2. Distinctive governance and management (Subotzky, 1999)
3. Entrepreneurial development in education and learning	3. Value innovation and execution	3. Activities aimed at developing entrepreneurial culture (Kirby, 2002)
4. Networks for entrepreneurs	4. Prioritize culture over structure	4. Contribution to economic development with the creation of new businesses (Chrisman et al., 1995)
5. External relationships with companies for knowledge exchange	5. Promote relationships between students and entrepreneurs	5. Marketing of research works (Jacob et al., 2003)
6. Internationalized institution		
7. Impact measurement		

Source: Bikse, Lusena-Ezera, Rivza, Volkova (2016)

In short, the university must integrate entrepreneurship into each of its aspects, show excellent leadership in all its levels, innovative schools with

tangible impact on their resources that deliver education, a strong involvement with their students along with several opportunities of learning, businesses and local community. In addition, it must show a long-term commitment to develop entrepreneurship and set out businesses (Arnaut, 2010). According to this author, this transformation of traditional universities into entrepreneurial universities would mean integrating social and economic development, ensuring a higher education standard.

Where does entrepreneurship education take us?

The implementation of entrepreneurial topics in the academic curriculum has been a process, that is, it is something that has been built progressively over time. Although it is somewhat successful, it is a plan that continues growing. An important element that must have the entrepreneurship education is the adaptability to social demands, that is, the technique to do it must be as transformational for business as for pedagogy (Bikse, et al., 2016).

Besong and Holland (2015) suggest that Education for Sustainability is a good way to ensure the development of skills, knowledge and values that promote a way to operate that improves life quality without destroying the environment for future generations. Moreover, David and Bell (2016) propose that students learn to manage their skills and innovations towards green economy, with sustainable corporate goals.

Rico, Cámara, and Llamazares (2015) researched the impact of entrepreneurship education and found that both entrepreneurs and teachers claim that there must be training in how to manage businesses, specifically with knowledge of marketing, accounting or economics. On the other hand, experts in the matter believe in the need for training in transversal knowledge such as business plans, negotiation and project development. When it is applied to formal education, curriculums must not be limited only to strengthening attitudes but also to teaching them technical knowledge of how to manage a business effectively. Universities that have implemented

entrepreneurship education programs have shown progress. Some examples are the University of Stanford or the Institute of MIT in Cambridge, where entrepreneurship could be integrated into the disciplines, or their academic specialty has been used to create programs that help to push students to that direction. Stanford, with its program Mayfield Fellows, has encouraged more than 52 students to start business, 10 of them have been acquired by big companies such as Google until 2001 (Eesley & Miller, 2012). The University of Twente has created more than 200 companies (Hopkin, 2001), and the Massachusetts Institute of Technology has created more than 4,000 companies with earnings of \$232 billion, generating more than 1.1 million jobs. This is the direction that the entrepreneurship education must take as it is successfully integrated into the academy.

Another way for the entrepreneurship education future is the creation of thematic programs focused on sectors, industries or on a particular technology, instead of just giving a general idea on entrepreneurship. The Social Sciences Institute of Tata in Mumbai is an example of this change that entrepreneurship education could make. Its Master program in Social Entrepreneurship is specifically about competencies such as how to keep intact the holder value and not only the shareholder value (Joshi, 2014). This researcher says that there is a change of paradigm where entrepreneurship research is changing not only the way of thinking of how to train, teach and develop, but of how students must be educated to generate more impact.

An essential point in this process is that not all countries make changes at the same pace. Some of them have already launched a global strategy of entrepreneurship education in all education levels, while others are on the home straight. Therefore, the implementation initiatives will be different in each situation.

In addition, an effect can be seen in the formal business creation (legally registered and regulated) versus the informal business creation (illegal and not registered). A study carried out by Jiménez, Palmero-Cámara, González-Santos, González-Bernal, and Jiménez-Eguizábal (2015) found that tertiary

entrepreneurship education increases formal entrepreneurship due to high levels of self-confidence, low risk perceived and increase of capital, while the informal entrepreneurship decreases due to the awareness of the negative consequences. This could cause an increase of formal entrepreneurship in the future as entrepreneurship is integrated into the curriculums.

Latin America: What is the current condition of entrepreneurship education?

Latin America has diverse political systems and social realities and it has taken initiatives to strengthen the entrepreneurship field in academic curriculums, which is more evident in some countries than in others. Each country has tried to strengthen entrepreneurship according to their problems and specific needs, through programs that fit their situations and cultural values, such as, a program highly focused on education in Argentina. However, Dominican Republic or Mexico have failed to permeate the entrepreneurial value in the same way (Herrera & Yong, 2004). On the other hand, other countries such as Peru, where the entrepreneurial spirit is high although the lack of basic foundations that determine successful entrepreneurship as a strong educational background that develop competencies (Villarán de la Puente, 2014). This section will emphasize the entrepreneurship education modalities that take the lead in different Latin American countries, focusing on those delivered in schools and universities.

According to the analysis made by Herrera and Yong (2004), countries like Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Mexico and Dominican Republic have few educational improvements compared with other countries such as Colombia or Brazil, observing deficiencies in the curriculum design on essential elements in the entrepreneurial behavior, such as responsibility, autonomy, teamwork, adaptability, management of resources, social networks, risk taking and learning to undertake. However, there have been strong actions to counteract this reality. For example, Mexico has programs that allow students to consolidate their projects with business

objectives through the curriculum axis Toca (2010). Some of them have obtained the certification Incubators of Traditional Businesses, which allows supporting micro-entrepreneurs, information services and advice on business plan, registration of companies, guidance on obtaining financing, among others (De Xena, 2012). The Secretariat of Economy, through the National Institute of the Entrepreneur (INADEM), has created the University of the Entrepreneur, where entrepreneurs and business people can have access to online courses and tools that will serve to strengthen their knowledge, skills and capacities in order to materialize their ideas, to grow or consolidate businesses. Regarding primary and secondary education, Mexico has very few proposals for including it in its curriculums (Damian, 2015), although it has been recently improved. A program created to face this situation, *Mi Primera Empresa* (My First Business): undertaking by playing, by the National Association of Universities and Higher Education Institutions (ANUIES, by its Spanish initials) and the Higher Education Foundation-Business (FESE, by its Spanish initials), try to provide children with basic knowledge through a project consisting in creating a children's company, from which it is expected to learn about entrepreneurial behavior and culture. It has proven to be effective in showing that children are able to acquire and apply theoretical knowledge of entrepreneurship (Damian, 2015). Outside the country, the Mexican State has created business accelerators (Technological Business Accelerators) in order to promote business internationalization of the country (Kantiss, 2011).

In countries like Argentina, Bolivia, Chile, Paraguay and Uruguay, when evaluating sources promoting the entrepreneurial spirit per sectors: civil, public and private, it was found that civil society is the sector that is more involved in developing the entrepreneurial spirit in young people, with 75 programs implemented (71.4% of all the programs in the three sectors). Followed by the public sector with 19 (18.10%) and finally, the private sector with 11 programs (10.48%) (Fernández, 2004). These results are relevant since, in civil society, universities are the ones that mostly encourage young

people from these in entrepreneurship, along with business incubators. Factors like rate of students attending universities must be considered. The formal incorporation of entrepreneurship teaching in public schools is proposed as a viable alternative in these countries, and this could include young people who cannot have access to the higher education (Fernández, 2004).

Brazil was at some point one of the most entrepreneurial countries of the world according to the Brazilian Service of Support to Micro and Small Enterprises (Sebrae), where almost 13% of the adult population was entrepreneurial by 2003. Since then considerable time has passed and Brazil is not considered as such anymore. Many programs to foster entrepreneurship are for young people through training programs and incentives for businesses. In the entrepreneurship education field, the Ministry of Education has two prominent programs aimed at achieving these goals: Technical Entrepreneurship Program for technical/professional schools, and Entrepreneurship Education Program for Secondary Education. The first one is aimed at disseminating the entrepreneurial culture in order to develop initiative in teachers and students (initiative development, problem solution and result-based work). This program has more than 35 incubators associated with it since 2004. The second one is aimed at the integration of entrepreneurship in all disciplines. The program Projovem is aimed at stimulating entrepreneurial competencies through the support that allows them to create self-employment; it is based on student projects and not in curriculums.

Colombia, Ecuador, Peru and Venezuela started to show signs of entrepreneurship education in late 1990s (Lozano, 2004). Colombia has centers inside its universities to develop innovative entrepreneurial culture and from the social responsibility perspective, it works on areas related to entrepreneurial spirit, such as culture, business creation, training of entrepreneurial leaders, entrepreneurship education, family business management and SMEs management (De Xena, 2012). In addition to

programs aimed at strengthening the business environment in specific areas of the country.

Venezuela, according to Pietrosemolli (2006), has shown backwardness with respect to entrepreneurship since it did not create a window that allows fostering a strong, creative and increasing entrepreneurial spirit; a price that future generation will pay. De Xena (2012) calls for a more participative role of the State, individuals and companies so they plan, integrate and coordinate the achievement of coherent and sustainable national development objectives to counteract its sociopolitical situation. His study concludes that the education sector is aware of that need, and it bets on the development of the country through entrepreneurship education managers although it is not an objective directly supported by the State.

Peru is a country with a high rate of entrepreneurial activity. In fact, many times it is considered one of the most entrepreneurial countries in the world, including in GEM reports. In the 2012 report, it obtained a total entrepreneurial activity (TEA) of 23%, it was ranked third, after China and Chile that have a TEA of 24%, each. However, this is greatly due to informal micro-enterprises that are not able to sustain themselves. The role the entrepreneurship education has played in the country to counteract the creation of thousand low profitability micro-enterprises is more silent than in other Latin American countries. This does not mean that there is no educational activity, several programs have tried to counteract this condition.

Villarán de la Puente (2014) says that the foundation used to implement entrepreneurship efficiently in education depends on how good problems in higher education and universities in the country can be managed, taking into account that the country has a legal system of extreme autonomy, making difficult the application of public policies, in addition to deficiencies in technical education. Therefore, it is proposed that entrepreneurship is taught from basic education.

Regarding entrepreneurship education, Peru has several universities that teach the development of entrepreneurial competencies, generally with the objective to expand the phenomenon of entrepreneurship and innovation worldwide, in addition to encourage students studying entrepreneurship courses in business spirit. Peru has made efforts so that students explore business environments inside and outside the country, giving them the opportunity to interview leaders of the area, to know professional associations and chambers of commerce of the region (Lozano, 2004). Thus, they keep a latent impression of entrepreneurial models that can be adopted and adapted to the needs of the country.

According to the National Curriculum Design of Regular Basic Education (2008), Regular Basic Education (RBE) is aimed at “developing work and economic activities that organize their life project and contribute to the development of the country”, and “developing learning in sciences, humanities, technique, as well as those that allow the student the good use and usufruct of new technologies”. For that reason, a window for entrepreneurship education is opened. In particular, Villarán de la Puente (2014) found two elements within his objectives: the development of the productive, innovative and entrepreneurial capacity as part of the construction of the life project of the citizen, and the development of creativity, innovation, appreciation and expression through arts, humanities and sciences.

The Ministry of Education of Peru (2009) indicates that secondary education works on the following attitudes in students: entrepreneurial willingness, willingness and confidence in themselves, will and self-motivation for goal achievement, autonomy to make decisions and act, willingness to work cooperatively and willingness to lead, value of the biodiversity of the country and identification of the students with the sustainable development, all of them are part of the core of the entrepreneurial behavior.

Taking into account these entrepreneurship education proposals, a way to see the situation positively, according to Villarán de la Puente (2014), is to use the high energy to undertake already existing in the country as an

impulse to fully implement the entrepreneurship education, and to capture the existing interest in self-employment in order to create viable and formal microenterprises with high profitability that can sustain themselves economically.

The study performed by Sánchez and Hernández (2016) talks about indicators of Entrepreneurship Education in Latin America, specifically Argentina, Ecuador, Mexico, Panama, Peru and Uruguay. It is worth mentioning the conclusions reached by these authors, which clearly show that the level of entrepreneurship education of these countries is a good predictor of its rate of entrepreneurial activity, thereby stating the importance of the entrepreneurship education for the entrepreneurial development of the countries involved.

Conclusions

Entrepreneurship education has undeniably progressed since it was implemented in business schools as courses in the middle of the last century. Since then and since its integration into the University of South Carolina, its expansion in the global map during the 80's, its condition has completely changed: it went from being an optional course to programs that currently exist in universities as a completely integrated element through transversal curriculums.

There is no doubt that entrepreneurship is a strong tool to deal with job difficulties faced by young people in many societies worldwide. In addition, it is a source of creativity and innovation that significantly contributes to the development of societies. However, after the review of the literature and exploration of the background in Latin American countries, it is essential to be able to create a system that guides and supports the development of entrepreneurial mindset and spirit. Entrepreneurship should not be simply seen as a solution to unemployment of young people, since it tends to have high rate of failure, but it must be used as a way to raise awareness of what

means to undertake and what does it take to do it effectively (Furtado, 2003). It should be developed to change the mental “chip” of young people so that they do not only think about self-employment as a work project, but as a way to improve their development and that of society. Psychological variables associated with success, such as personal factors: self-efficacy, internal locus of control and proactivity; and its sociocultural background: attitude, control perceived, subjective norm and reliability must be always used as a foundation in the proposals conducted to promote the entrepreneurial culture in education, even more when it has been shown that they promote the creation of formal companies.

As an answer to the initial question: How can we strengthen the entrepreneurial spirit in our students? Learning to undertake, the fifth pillar of education, plays an essential role to foster the entrepreneurial intention to materialize successful and sustainable realities. Particularly, in Latin America, although it is a region of countries with abundant resources, the current reality brings constant challenges such as technology and competition worldwide. With the arrival of both of them, the entrepreneurial curriculum has the opportunity to be adapted to this modality, allowing creating systems or programs that give the students the opportunity to interact with the outside world in order to learn and diversify their entrepreneurial techniques and ideas, adapting them to the reality of their country. Each country should recognize and detect those who have the potential to undertake, and develop action-taking spirit in them, since the solution of economic problems depend on the labor of the country. In short, identify entrepreneurial development opportunities and capitalize on them.

The operational efficiency between developed countries and developing countries cannot be measured in the same way. Many places worldwide do not have as easy access to education as the developed countries. Therefore, entrepreneurship education programs should not be only for private or public universities, but for any institutions that can teach education, such as public or private schools, from primary and secondary schools. Entrepreneurship

education becomes a project of all sociopolitical sectors of a country and in which all programs are regulated under the same principle: wherever you can educate. Considering that the entrepreneurial values can get weaker from an early age, it is strongly recommended that they are taught as soon as children start their education.

The importance of creating entrepreneurship education programs is not only to develop them but to keep them. They should be constantly evaluated to measure their effectivity and viability in the creation of competencies and the value of entrepreneurial intention in students. However, to really be a pillar of education, they should be fully integrated into the diverse academic curriculums. The entrepreneurship education must transcend its elective condition and become compulsory in the education field, so that a transversal education format is created, otherwise entrepreneurship will be only discussed superficially.

Finally, it must be taken into account that the predisposition to undertake is directly related to the role of culture and vice versa, becoming the agent that creates and promotes the entrepreneurial spirit. The person who decided to undertake must be recoded to impact directly on the development of their reality; their entrepreneurial values must be related to an intrinsic motivation but at the same time attached to the culture experienced even if it can also make an external change. Only then entrepreneurship education will have really succeeded.

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