Innovation, Technology, and Knowledge Management

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Student Entrepreneurship in the Social Knowledge Economy

Successful Cases and Management Practices

Springer

Innovation, Technology, and Knowledge Management

Series Editor
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Series Foreword

The Springer book series *Innovation, Technology, and Knowledge Management* was launched in March 2008 as a forum and intellectual, scholarly"podium" for global/local, transdisciplinary, transsectoral, public–private, and leading/"bleeding"edge ideas, theories, and perspectives on these topics.

The book series is accompanied by the Springer *Journal of the Knowledge Economy*, which was launched in 2009 with the same editorial leadership.

The series showcases provocative views that diverge from the current "conventional wisdom" that are properly grounded in theory and practice, and that consider the concepts of ***robust competitiveness***,[1] ***sustainable entrepreneurship***,[2] **and** ***democratic capitalism***,[3] central to its philosophy and objectives. More specifically, the aim of this series is to highlight emerging research and practice at the dynamic intersection of these fields, where individuals, organizations, industries, regions, and nations are harnessing creativity and invention to achieve and sustain growth.

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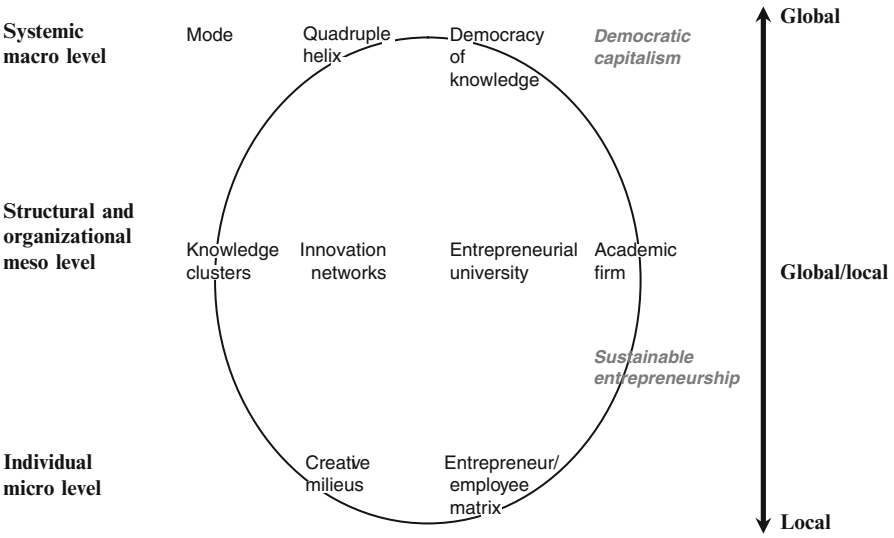
[1] We define *sustainable entrepreneurship* as the creation of viable, profitable, and scalable firms. Such firms engender the formation of self-replicating and mutually enhancing innovation networks and knowledge clusters (innovation ecosystems), leading toward robust competitiveness (E. G. Carayannis, *International Journal of Innovation and Regional Development* 1(3), 235–254, 2009).

[2] We understand *robust competitiveness* to be a state of economic being and becoming that avails systematic and defensible "unfair advantages" to the entities that are part of the economy. Such competitiveness is built on mutually complementary and reinforcing low-, medium-, and high-technology and public and private sector entities (government agencies, private firms, universities, and nongovernmental organizations) (E. G. Carayannis, *International Journal of Innovation and Regional Development* 1(3), 235–254, 2009).

[3] The concepts of *robust competitiveness and sustainable entrepreneurship* are pillars of a regime that we call "*democratic capitalism*" (as opposed to "popular or casino capitalism"), in which real opportunities for education and economic prosperity are available to all, especially—but not only—younger people. These are the direct derivatives of a collection of topdown policies as well as bottom-up initiatives (including strong research and development policies and funding, but going beyond these to include the development of innovation networks and knowledge clusters across regions and sectors) (E. G. Carayannis and A. Kaloudis, *Japan Economic Currents*, p. 6–10 January 2009).

Books that are part of the series explore the impact of innovation at the "macro" (economies, markets), "meso" (industries, firms), and "micro" levels (teams, individuals), drawing from such related disciplines as finance, organizational psychology, research and development, science policy, information systems, and strategy, with the underlying theme that for innovation to be useful it must involve the sharing and application of knowledge.

Some of the key anchoring concepts of the series are outlined in the figure below and the definitions that follow (all definitions are from E. G. Carayannis and D. F. J. Campbell, *International Journal of Technology Management*, 46, 3–4, 2009).



Conceptual profile of the series *Innovation, Technology*, and *Knowledge Management*

- The "Mode 3" Systems Approach for Knowledge Creation, Diffusion, and Use: "Mode 3" is a multilateral, multinodal, multimodal, and multilevel systems approach to the conceptualization, design, and management of real and virtual, "knowledge-stock" and "knowledge-flow," modalities that catalyze, accelerate, and support the creation, diffusion, sharing, absorption, and use of cospecialized knowledge assets. "Mode 3" is based on a system-theoretic perspective of socioeconomic, political, technological, and cultural trends and conditions that shape the coevolution of knowledge with the "knowledge-based and knowledge-driven, global/local economy and society."
- Quadruple Helix: Quadruple helix, in this context, means to add to the triple helix of government, university, and industry a "fourth helix" that we identify as the "media-based and culture-based public." This fourth helix associates with "media," "creative industries," "culture," "values," "life styles," "art," and perhaps also the notion of the "creative class."

- Innovation Networks: Innovation networks are real and virtual infrastructures and infratechnologies that serve to nurture creativity, trigger invention, and catalyze innovation in a public and/or private domain context (for instance, government-university-industry public-private research and technology development coopetitive partnerships).
- Knowledge Clusters: Knowledge clusters are agglomerations of cospecialized, mutually complementary, and reinforcing knowledge assets in the form of "knowledge stocks" and "knowledge flows" that exhibit self-organizing, learning-driven, dynamically adaptive competences, and trends in the context of an open systems perspective.
- Twenty-First Century Innovation Ecosystem: A twenty-first century innovation ecosystem is a multilevel, multimodal, multinodal, and multiagent system of systems. The constituent systems consist of innovation metanetworks (networks of innovation networks and knowledge clusters) and knowledge metaclusters (clusters of innovation networks and knowledge clusters) as building blocks and organized in a self-referential or chaotic fractal knowledge and innovation architecture,[4] which in turn constitute agglomerations of human, social, intellectual, and financial capital stocks and flows as well as cultural and technological artifacts and modalities, continually coevolving, cospecializing, and cooperating. These innovation networks and knowledge clusters also form, reform, and dissolve within diverse institutional, political, technological, and socioeconomic domains, including government, university, industry, and nongovernmental organizations and involving information and communication technologies, biotechnologies, advanced materials, nanotechnologies, and next-Generation energy technologies.

Who is this book series published for? The book series addresses a diversity of audiences in different settings:

1. *Academic communities:* Academic communities worldwide represent a core group of readers. This follows from the theoretical/conceptual interest of the book series to influence academic discourses in the fields of knowledge, also carried by the claim of a certain saturation of academia with the current concepts and the postulate of a window of opportunity for new or at least additional concepts. Thus, it represents a key challenge for the series to exercise a certain impact on discourses in academia. In principle, all academic communities that are interested in knowledge (knowledge and innovation) could be tackled by the book series. The interdisciplinary (transdisciplinary) nature of the book series underscores that the scope of the book series is not limited a priori to a specific basket of disciplines. From a radical viewpoint, one could create the hypothesis that there is no discipline where knowledge is of no importance.
2. *Decision makers—private/academic entrepreneurs and public* (*governmental, subgovernmental*) actors: Two different groups of decision makers are being addressed simultaneously: (1) private entrepreneurs (firms, commercial firms, academic firms) and academic entrepreneurs (universities), interested in optimizing

[4] E. G. Carayannis, *Strategic Management of Technological Learning,* CRC Press, 2000.

knowledge management and in developing heterogeneously composed knowledge-based research networks; and (2) public (governmental, subgovernmental) actors that are interested in optimizing and further developing their policies and policy strategies that target knowledge and innovation. One purpose of public *knowledge and innovation policy* is to enhance the performance and competitiveness of advanced economies.

3. *Decision makers in general:* Decision makers are systematically being supplied with crucial information, for how to optimize knowledge-referring and knowledge-enhancing decision-making. The nature of this "crucial information" is conceptual as well as empirical (case-study-based). Empirical information highlights practical examples and points toward practical solutions (perhaps remedies), conceptual information offers the advantage of further driving and further-carrying tools of understanding. Different groups of addressed decision makers could be decision makers in private firms and multinational corporations, responsible for the knowledge portfolio of companies; knowledge and knowledge management consultants; globalization experts, focusing on the internationalization of research and development, science and technology, and innovation; experts in university/business research networks; and political scientists, economists, and business professionals.
4. *Interested global readership:* Finally, the Springer book series addresses a whole global readership, composed of members who are generally interested in knowledge and innovation. The global readership could partially coincide with the communities as described above ("academic communities," "decision makers"), but could also refer to other constituencies and groups.

Elias G. Carayannis
Series Editor

Preface

Student entrepreneurship feeds the interaction between people, ideas, and capital that enables the development and the creation of employment opportunities, starting a virtuous cycle of accumulation of technological and organizational knowledge, and—of course—the possibility of creating new businesses.

Actually many governments foster innovation and entrepreneurship across higher education institutions and the private sector to inspire, educate, connect, accelerate, and fund start-ups. A broad spectrum of offerings about the programs, events, and resources takes students through the process of learning what it takes to become a successful small business owner or manager.

In particular, undergraduate and graduate entrepreneurship explores a wide variety of venture concepts: ranging from the micro-enterprises to start-ups with high growth potential and from small business for supporting the family firm to innovative enterprises that create wealth. In addition student entrepreneurship has a well-established literature and has been the subject of a number of studies regarding attitudes, barriers, and motivational factors for entrepreneurial behavior.

Accordingly, because of the amount of theoretical concepts, models, and frameworks, it is necessary at this stage to identify the practices and future requirements of students, teachers, and organizations.

As a response to this broader question, the handbook is organized into three parts, each looking for focus to what has already been investigated and what is emerging.

Part I: The Institutional Dimension of Entrepreneurship—Background and Foundations of Research Perspectives

Where do entrepreneurial opportunities come from?
How can higher education best stimulate the creation of firms emanating from young and smart minds in colleges and universities?
How are brain circulation and social networking helping young people to disseminate their ideas worldwide?

As the scope of the academic system expands, it is important to cross talents and skills to create an environment conducive to the development of an innovative entrepreneurial humus.

The wave of student entrepreneurs is not a fad but a force that reshapes the economy with innovation and intangible investment: currently the process of sustained and sustainable growth is a challenge that launches new educational activities for the emergence of global entrepreneurs, without boundaries of gender, culture, race, and geopolitics.

The multilateral and transdisciplinary investment for contacting academic knowledge with the world of entrepreneurship, peripheral to it or even unknown, is part of a collective effort: the enhancement of entrepreneurial knowledge, transforming the know-how in the "know why" and "know what to do," ends up incessantly in drawing and editing the paths of student entrepreneurship.

Inventions come not from technical or cultural imperatives alone, nor from individual and institutional will alone, but from the constant interaction of these elements. Inventions are to be understood as human creations, produced by imagination interacting with the most fundamental values and concerns of everyday existence. The institutional nature and momentum of invention have changed notably in recent decades. Most fundamentally, people in general will not be just beneficiaries but participants in ways small and large in a culture of inventiveness. Schooling at all levels incorporates engaging and energizing aspects of creativity in particular and entrepreneurial ambitions in general. Opening up entrepreneurial support programs to students and graduates from academic institutions provides opportunities for the development of enterprise awareness training and new start-up initiatives.

Part II: Customizing Academic Resources to Graduate Entrepreneurial Specificities

What is the value of Massive Open Online Course (MOOC) for frequent, early, and "thick" communication among the various specialties needed to accomplish entrepreneurial project?

How do we know whether social media system affects students' response to new knowledge and new ideas?

What is the influence on student entrepreneurship of digitized content in higher education?

In the knowledge economy that marks the twenty-first century, universities play a key role for encouraging students to work in teams and to engage in each aspect of running a business. Students have the opportunity to participate in designing their own learning and are motivated to think, plan, and act as entrepreneurs.

Universities are venues for a greater range of ideas and interdisciplinary perspectives than any other institution in the innovation system. They are the only places where advanced research and education are integrated on a large scale.

Cultivating the entrepreneurial generation 2.0 is very different than using traditional teaching methods. Fortunately, many academic institutions are taking measures to promote the "online" educational revolution. Providing Web-based services to students and educators makes it possible for everyone to become educated.

For example, MOOCs offer free or low-cost, high-quality higher education classes to hundreds of thousands of people on the Internet, making it easier to learn whatever—and wherever—they want. Once students are online, there is no limit to what you can do with the vast amount of information available to them or to the mode of interaction or mutual learning.

Latent entrepreneurial potential of our Millennials turns into start-ups driven by nonconventional connections between the physical world and virtual reality. Young entrepreneurs of cyberspace grow.

Part III: Gender, Ethnicity, and Cultural Background Differences in Student Entrepreneurship

To what extent do educational practices affect racial and ethnic differences in student entrepreneurship?

What is the role of indigenous minority student entrepreneur in establishing high-technology firms?

What kind of different approach have ethnic groups deployed to confront problems of typical student entrepreneurship?

Does a high rate of entrepreneurship among co-ethnics give students better chances of having source of new inventions and of interpreting and of extrapolating that innovation for new purposes?

The dynamic nature of the student entrepreneurship field is reflected in the fact that discussions, analyses, proposals, and perspectives expanded to encompass emerging contributions stemming from different competing views.

The legacy of divergent cultural backgrounds as drivers of entrepreneurial behavior reflects the models that dominate the tradition of inquiry but also challenges them to adapt to evolving conceptualizations.

The constant flow of new students through universities continuously revitalizes the academic enterprise, challenging the assumptions of faculty and bringing fresh perspectives to research. Social stereotypes and social barriers have diminished, and students of diverse gender, ethnicities, and faiths participate vigorously in innovation just like a community of inventors. These are potentially conditions favorable to inventiveness and include the bringing together of problem formulation, boundary transgression, focused effort, and open, creative minds.

The political dimensions of entrepreneurship look at the power differences that are likely to have significant impacts on the "entrepreneurial career of ideas."

In particular, racial and ethnic differences in entrepreneurship behavior have been attributed to opportunity structures and to group characteristics by self-employment scholars.

Our work has endeavored to identify, through main research carried out on the proposed topics, the knowledge gap inherent to the processes of cross-cultural entrepreneurship, ethnic entrepreneurship, and diversity management.

Specific approaches to develop a framework which describes the relationships of genetic processes, pathways to success, and effects on the "local economic fabric" of immigrant student enterprises are presented. The model should help explaining the reasons for the success of such forms of entrepreneurship, even in a period of strong global economic crisis. It should, finally, throw light on the possible interaction of such enterprises with the national autochthonous ones, showing whether to consider such a phenomenon as an opportunity or a threat for the latter.

In this book we attempt to synthesize the ideas of many contributors as well as those of our own research. The result, we hope, is a more comprehensive guide to the subject than has hitherto been available. In order to make this book a more flexible resource for its readers, each chapter is followed by its own set of references to sources and further reading. In preparing this book, we have been significantly assisted by many companies with which we have worked and the executives who have provided us with so many international case examples.

Paris, France — Manlio Del Giudice
Naples, Italy — Maria Rosaria Della Peruta
Washington, DC — Elias G. Carayannis

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Part I
The Institutional Dimension of Entrepreneurship: Background and Foundations of Research Perspectives

Chapter 1
Processes of Entrepreneurship and New Venture Creation

Elias G. Carayannis

1.1 Introduction

The creation of new enterprises is at the basis of economic and social development (Low and MacMillan 1988; Wu 1989; Timmons 1999; Timmons and Spinelli 1994). It conditions developments from the results of basic and applied technological research and the industrialization and commercialization of innovations (Del giudice et al. 2013a, b; Carayannis and Korres 2013; Campbell and Carayannis 2013; Serrano 2010).

New enterprises are recognized for their capacity of expanding the production base and regenerating industrial sectors (in terms of manpower, production and organizational methods), also through the development of innovative processes of either production or procedures (Hisrich and Peters 2006; Bruyat and Julien 2001; Hisrich and Peters 1998; Goldsmith and Kerr 1991; Drucker 1985; Gabor 1970; Schumpeter 1934, 1947; Kirzner 1973, 1985, 1997; Van Praag 1999).

There is little doubt about the role of new enterprises in the introduction of technological and entrepreneurial innovations, in the development of new strategic areas of highly innovative enterprises in terms of technological knowledge and the market, and also in new strategic areas for business that are not innovative from the point of view of technology, but that, in any case, require innovative organizational knowledge (Breschi and Catalini 2010; Edler et al. 2011; Ireland et al. 2001; Lai 2011; Lichtenthaler and Lichtenthaler 2010; Reid 1999; Harper 1996; Hayek 1945).

In the most industrialized countries and in the emerging economies the theme of the creation of enterprise and new entrepreurship has taken on a central role in the debate on the choices of economic policy and has now met renewed interest in the field of

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economic, business and organizational research (Venkataraman 1997; Shane 2003, 2008; Shane and Venkataraman 2000; Shane 1992, 1993; Steyaert and Katz 2004; Blanchflower and Oswald 1998).

The importance of the phenomenon in question is mainly due to the beneficial effects which it has within the contexts of development (Audretsch 1995; Audretsch and Thurik 2000, 2001).

Four such contexts can be identified (1) the expansion of the production base and the consequent reduction of the unemployment rate, (2) the industrialization of economically underdeveloped areas, (3) the regeneration of industrial sectors or areas in terms of manpower, production and organizational methods, (4) the sector by sector ramification and diversification of the industrial structure of a given country.

Additional contexts may be added, that concern motivations connected to changes in competitivity in businesses sectors, the progressive expansion of the markets, the considerable development of communications and knowledge, the reduction of geographical boundaries, besides the already noted non-successes of the past policies of economic and industrial development and the creation of employment.

On this question, an undoubted impact on the phenomenon of the creation of new enterprises has come from the crisis of big businesses and the progressive loss of credibility of the hypothesis according to which the only way for a modern economy to operate in economically efficient conditions was by increasing the average dimensions of businesses and reducing the weight of small businesses, thereby increasing the level of concentration of production in order to face the external markets in a more competitive fashion.

In parallel, the progressive emergence of the vitality of small businesses, of their flexibility and capacity to innovate, together with greater accessibility of new technologies on the part of small businesses has set off important processes of entrepreneurial development and as a consequence an increase in the number of processes for the creation of new businesses.

Over the years, the dynamism brought to the competitive context and the advent of newer and newer technologies able to enhance the skills of flexibility and creativity in entrepreneurial behavior has led many researchers to investigate the theme of the formation of new businesses and the genesis of the new entrepreneurship (Evans and Jovanovic 1989; Evans and Leighton 1990; Evans 1987a, b; Highfield, and Smiley 1987; Holcombe 1998; Jovanovic 1982, 1993; Kihlstrom and Laffont 1979).

1.2 Thinking Historically About Entrepreneurship

Over the years, a series of contributions have been developed in economic literature on business and management, aimed at studying the determinants and motivations that form the foundations of the processes of the creation of new businesses and the consequent new entrepreneurship.

Studies of the *classical microeconomists* themselves, for example, observed how the determinants of the process of the formation of new businesses originated from

the hypotheses of a lack of perfect competition, determining, in the case of competitive markets, that the decisional problem of potential entrepreneurs was substantially that of identifying a possible difference in the profit rates between the different sectors (Casson 2003; Earl 2003; Kirzner 1979; Metcalfe 2004; Swedberg 2000).

> The entrepreneur organizes and operates an enterprise for personal gain. He pays current prices for the materials consumed in the business, for the use of the land, for the personal services he employs, and for the capital he requires. He contributes his own initiative, skill, and ingenuity in planning, organizing, and administering the enterprise. He also assumes the chance of loss and gain consequent to unforeseen and uncontrollable circumstances. The net residue of the annual receipts of the enterprise after all costs have been paid, he retains for himself (Richard T. Ely and Ralph H. Hes 1937)

Studies of a quintessentially *economic* type identify four main hypotheses regarding the creation of new businesses: (1) the innovation hypothesis (2) the market hypothesis (3) the self-employment hypothesis and (4) the hypothesis of the role of the universities, of incubators and research centers in both their territorial and business versions.

According to the *Schumpeterian line of innovation*, new entrepreneurship starts from the initiative of the potential entrepreneur who, imagining new productive combinations (in terms of goods, means of production and markets), decides to give life to a new business, thereby breaking the preexisting market equilibrium.

> The function of the entrepreneur is to reform or revolutionise the pattern of production by exploiting an invention or, more generally, an untried technological method of producing a new commodity or producing an old one in new way, opening a new source of supply of materials or a new outlet for products, by organizing a new industry (Joseph Schumpeter 1952, p 72).

According to some authors like Smith and Stigler and Kirzner and Knight for whom the role principal variable is occupied by the market, the start of new enterprises is strictly linked to the expansion of the sector and/or the market, especially in the phases of positive conjuncture, since with the growth of goods and services it is necessary to reorganize and expand the system of production so as to adjust the new supply.

As Smith and Stigler observe, neo-entrepreneurship initiates from the externalization of some functions following the process of the division of labour (Smith 1776) and of processes of specialization of production (Stigler 1966) that allow a concentration of resources on a reduced number of functions, delegating others to external businesses. According to Kirzner and Knight, instead, the development of new entrepreneurial activity initiates from the capacity of the potential entrepreneur to act swiftly in the light of new opportunities (in terms of profits) and new information inside a market characterised by uncertainty (Kirzner 1973; Knight 1921).

> Knight introduces judgment to link profit and the firm to uncertainty. Entrepreneurship represents judgment that cannot be assessed in terms of its marginal product and which cannot, accordingly, be paid a wage. This is because entrepreneurship is judgment in relation to the most uncertain events, such as starting a new firm, defining a new market, and the like. In other words, there is no market for the judgment that entrepreneurs rely on and, therefore, exercising judg-ment requires the person with judgment to purchase and organize

> factors of production—in other words, to start a firm. Judgment thus implies asset ownership, for judgmental decision making is ultimately decision making about the employment of resources (Foss and Klein 2010, p. 147).

Moreover *self-employment is viewed as the simplest form of entrepreneurship*, developed in the *organizational and social setting*. The theme of *self-employment can be* seen as the will of some subjects to self-create an alternative source of work and income for themselves by starting new entrepreneurial activities (Kolvereid 1996; Hamilton 2000; Parker 2004; Douglas and Shepherd 2002). Moreover, the principal motivations of a *start-up* may be of a *strictly entrepreneurial nature* (response to specific organizational-strategic opportunities) or of a *strictly social nature* (*job creation* initiative) since the creation of new enterprises is correlated to the fall of migration rates, to the slowing down of the processes of rural depopulation and metropolitan growth, and to the spread of higher and more homogeneous living standards. In particular, the main variables are identified in the existence of external structures and subjects able to help the process of genesis of new enterprises.

According to this interpretation it is the territory, with its distinctive characteristics (industrial areas, local systems etc), and the role of *the institutions* (among which a determining role is played by the universities) that favor the spread of the entrepreneurial spirit.

The above is all the more valid when referring to the last few years, also because of the great changes which have characterized the world economic picture (the globalization of the economy, changes in the geopolitical and economic scene, the problems of the development sustainability and the growth of national economies), which have imposed the need for an ever closer relationship between territory, institutions and entrepreneurship.

> The research stream on environmental context including networks of innovation emphasizes that university entrepreneurship is a result of being embedded in networks of innovation, which in turn are influenced by the larger environment. Measures of university entrepreneurship center around firm performance along several dimensions: growth, productivity, graduation from incubators, firm differential performance compared to those outside the specific environment, and competitive advantage (based on human capital or social capital). Scholars in this stream have identified four factors that directly influence university entrepreneurship: innovation networks, science parks, incubators, and geographic location. The underlying science and faculty involved are seen more as mediating factors in this line of research (Rothaermel et al. 2007, p. 765).

In fact, it shall be our objective to give special attention to the possibilities offered by their relationship with the main institutional bodies operating in a determined context (i.e. the university system) that a student entrepreneur can take advantage of.

To do this we shall take our starting point as the capacity of the universities to initiate effective systems of relationships between the people and the businesses, exchanging, sharing and concretizing ideas, projects, knowledge, experience and technologies and thereby favoring the formation and continuation of long-lasting social capital, at the basis of the processes of new entrepreneurship.

Where do Entrepreneurial Opportunities Come from?

Between the lines of the Shanghai Ranking, the annual international listing of universities, there is a hidden novelty. Five of the "top 10" universities in the world are also present in the world classification of the best entrepreneurial universities: Stanford, Cambridge, Oxford, UC Berkeley and MIT in Boston. During the wind of change brought by the digital revolution, these structures did not raise defensive walls. They preferred to build the windmills and become entrepreneurial universities. Their power is supplied by the collective energy of a multitude of actors working together, each of whom is the producer of a "blade" that accesses the body of knowledge to extract entrepreneurial DNA. In the United States more than three-quarters of the increase in productivity after 1995 can be traced to investments in science that have translated into new enterprises. Annually, more than 400 startups have been created from a university base. Among these are protagonists of the digital economy like Google, Netscape, Genetech, Lycos, Sun Microsystems, Silicon Graphics and Cisco Systems. And the university startups have shown themselves to have longer lives than the others. Among those created in the period 1980–2000 68 % were still vital at the beginning of the century, while 90 % of the startups of other origins failed during the same period. Among the entrepreneurial academies of excellence, as well as American and English universities, we find the universities of Copenhagen and of Stockholm, the Indian Institute of Technology and the National University of Singapore.

The truth is that talent is everywhere: in the halls of the crowded Indian universities, in slums brimming with intelligence in Kenya and Nigeria, in the Chinese internet cafés. The sweeping economic development of the South of the world, globalization and the boom of new technologies are bringing millions of people out of poverty and illiteracy.

If we stop to consider the entrepreneurial universities at the margins of the world economy, we find the growth and development of the startups more promising.

Let us look at China. A sign of great ferment to promote technological development is arriving from China and a lot of young Chinese people want to launch startups. Obviously, internet offers the best opportunities. With more than 560 million users, China is the world's biggest such market. The boom of internet has also favored the capillary spread of smart phones: today there are 755 million Chinese people with mobile phone contracts, and this has allowed the creation of more than ten million jobs and numerous startups.

One successful example is the Chinese social network YY.com, one of the largest in the world with 400 million registered users. Starting with the creation of the games portal Duowan.com, it launched a chat service for players to coordinate with each other in 2008. Then the startup grew, becoming one of

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the principal communication platforms of the country. Today it offers a combination of video, music, games and educational programs. Its karaoke is widely popular: one person sings and other users, who follow the performance, comment via chat while a long virtual queue waits their turn to perform. YY includes 11 million channels, in both Chinese and English.

David Li, CEO and founder, has claimed that in the course of time YY has transformed from a from a means of communication to a form of entertainment and education. In fact, teachers and singers use the platform for conduct their professions and to earn supplementary income. It is calculated that the most famous singers can earn up to 20,000 dollars a month just through performance in streaming and relative events, besides having the chance of establishing a direct relationship with their public, increasing their fame. A young graduate, instead, has started giving lessons in Photoshop in a virtual class and seems to manage to earn up to 188,000 dollars a month, without giving anything to YY that is thinking of monetizing the platform, charging for the use of the educational channels.

The technology used is very complex and more than a thousand people work to guarantee the functioning of the site. For potential, YY has developed a business model believed by many to be more interesting than Facebook. It is backing diversification of what it offers, thereby allowing it to reach multiple targets and has income is guaranteed by the sale of virtual goods to the users. For a few months it has been quoted on the stock exchange and has attracted 96 million dollars of venture capital.

Co-founder of YY is Lei Jun, one of the main investors in startups connected to internet. The Chinese media define him the "Steve Jobs of China", especially since he founded the smart phone startup Xiaomi. Launched in 2010, it has already been valued at four million dollars and has sold more than seven million items. The force of this product lies in offering clients smart phones of quality similar to the iPhone and Samsung Galaxy, but at half the price. One example is the version Mi-One Youth Edition which costs about 1,500 yuan (186 Euro) for a product with 1.2 GHz dual-core, 4 GB of expandable internal memory, 768 MB of Ram, a 4″ display and an eight megapixel photo camera.

Lei Jun says he is inspired by Apple but the difference is in the business model of Xiaomi, connected mainly to internet. In fact, most of the sales occur online and in small quantities, with a competitive advantage compared to the better known operators in Chinese telephonics like Huawei Technologies or Lenovo Group. Confirmation of its success is the fact that the sales of the first lot of 50,000 smart phones was completed in less than a minute. In China the Mi-Two model has already been launched, at a cost of €220, and it is also awaiting commercialization in Europe. Recently, Xiaomi has announced that it wants to expand outside China with sales to Taiwan, Hong Kong and Singapore, and is waiting for 2014 or 2015 for its launch on the US market.

According to Lei Jun "mobile phones are the future", a theory shared by Pony Ma, CEO of Tencent Holdings. Based in Shenzhen, a place known as a

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manufacturing centre more than a center for innovations, Tencent is a web colossus (social network, online games, e-commerce) and one of the main investors in startups with a high technological content. Currently, it is attracting Chinese users with WeChat, an instant messaging app for smartphones. Only eight months after its launch, in 2011, it had 200 million users and has now gone over 300 million. Initially the name of the app was Weixin, then changed to WeChat because it is simpler to pronounce and can be more competitive at an international level.

It is now available in Chinese, English, Indonesian, Portuguese, Russian and Spanish but has the ambitious objective of a launch at an international level. For the Chinese, WeChat is more complete than other similar popular applications like WhatsApp. Besides messaging it is possible to share videos and photos that can be improved with special filters and commented on. Then there are the functions "Look Around", showing who is in the area and making it is possible to meet people or "Drift bottle", for writing a message in a bottle and launching it into the virtual sea then waiting for someone to collect it and adds it to their contacts. The product is conceived for the internal market but it is already spreading outside the country, especially thanks to Chinese students that consider it the best instant messaging app in circulation.

As well as the large structures like Tencent, there are a lot of startups at Shenzhen that are active in the country. One of these is Dianboom, a 3D e-commerce platform. Launched at the end of 2011 in the presence of 800 Chinese web entrepreneurs, it is thought a revolutionary project. It is a B2C platform and allows single e-commerce websites to have a sales space for clients, synchronising the database and creating an atmosphere as if it were a real commercial center. In this way it is possible to create a network for exchanging information on bargains, promote development of marketing and have the opportunity of distributing western brands.

In fact, it seems that the first e-commerce in 3D was made by Subaye, an online service provider based in the province of Guangzhou. Started in 2010, access was free for users until 31 January 2011. Now members pay the equivalent of US$117 per month to show their products and services that are considered much more interesting by clients thanks to the 3D images in a virtual shopping mall. For every sales transaction, a tax of 3 % is charged.

The most significant results in the field of e-commerce are those of Meituan. This startup is based in Beijing and was founded in 2010 by Xing Wang, known as the entrepreneur of clones. The IT engineer has often copied successful models, adapting them to the Chinese market. The best known case is RenRen.com, the most used social network in China, similar to Facebook. Meituan is similar to Groupon and has seen rapid growth. At the end of 2011 it was already a leader in the sector, with monthly sales of more than 27 million dollars, while in mid-2012 it surpassed 66 million dollars monthly. The founder

(continued)

explained that the constant success is the result of a series of factors like the spread of the site in many Chinese cities, high quality production at low cost and the ability of reinvesting in promotions and human resources. With constant growth, Meituan has managed to emerge from numerous e-commerce startups in China, never attempting to take a step beyond its abilities.

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Chapter 2
Managing the Entrepreneurial Process: The Relationship Between Universities and Early Entrepreneurship

Elias G. Carayannis

2.1 Introduction

The prospects for growth and for transformation of the system may depend on its ability to generate new entrepreneurial initiatives and on the specific characteristics of the new entrepreneurs.

In fact, the arrival of new ideas and new entrepreneurs in an economic-productive system is a vehicle for the innovation of products and processes and allows the development and creation of areas of employment and the start of virtuous cycles of accumulation of technological and organizational knowledge, as well as an obvious chance for the creation of new wealth (Bourdieu 1997; Brinkley 2008). By virtue of this "process of accumulation" the interaction between people, ideas and capital is fueled in a determined context produced to some extent by each new enterprise, and in this way produces an innovation to the system (Pittaway and Hannon 2007; Agrawal 2001).

In the current economic evolution, the development of ideas and creative projects is taking on an ever more relevant economic value, reaching a point where some authors write about "creative economy" and about "economy of experience" (Wilkinson 2005; Wilsdon and Keeley 2007; Woolcock 2001), terms meaning a specific branch of the economy that includes some sectors (generally hi-tech) able to generate new wealth and "intellectual property" (patents, copyrights, brands, registered designs) that also support, in this way, the development of traditional economic sectors (Freeman and Barron 2006).

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This picture illustrates how there is a notable need for efforts by subjects like the State, the local administrations, the universities and centers of research to contribute towards and assist, in widely varied forms, the creation of new enterprises and their subsequent survival (Gibson and Smilor 1991). The specific task of these institutional bodies should be that of identifying a series of relationships and instruments able to improve the processes of new entrepreneurship and help the entrepreneur to face and overcome the difficulties that characterize the initial phases of a process of new business creation.

2.2 Institutions and Early Entrepreneurship: Creating Conditions for New Venture Creation

Over the years a proliferation of initiatives giving incentives to new entrepreneurship have been seen, both of a financial nature (tax breaks for young entrepreneurs) and of a non-financial nature (availability of business incubators). For example, the European Community offers member states a vast panorama of measures for the support and the development of new entrepreneurship. Since as long ago as 1998 measures to encourage single individuals to create an enterprise have been in place. Some measures foresee actions promoting and giving training on the subject of entrepreneurial culture and others are aimed at administrative simplification, at improving access to financing and at encouraging new technologies.

For a number of years, at an international level universities have already taken on a dynamic role on the issue giving value to entrepreneurship, particularly focusing efforts on the internal transformation of research results into enterprises, occupying themselves with the strategic management of intellectual property, the promotion of the creation of new entrepreneurial initiatives (spin off) and in setting up incubators and scientific parks (Gibb 2005; Price et al. 2004; Purcell et al. 1999; Pucell and Elias 2004).

In fact, the profitable collaboration between universities and entrepreneurship puts the community in a condition to enjoy the benefits of technology that has seen experimentation inside the academic institutions and allows the proliferation of new enterprises that can evolve into large businesses and generate opportunities of employment and development of the national economy (Greene and Saridakis 2007; Handscombe et al. 2007).

> "Implicit to this imperative are a number of assumptions as follows:
>
> - that entrepreneurship is a major key to growth and competitiveness
> - that education and particularly higher education can influence aspiration to entrepreneurship
> - that policies and programmes can be designed to raise intentions towards entrepreneurial action and impact upon the conversion of these intentions into successful action" (Gibbs 2005 p. 13)

Student Entrepreneurship and the University of Pittsburgh

Do you wonder how you will turn your academic interests into a sustainable, independent career? Do you have a great idea that could change people's lives? Are you creative, dynamic and passionate?

According to a 2010 Kauffman Foundation study, job growth in the U.S. is driven by startups. It is no surprise that Pitt students are interested in using their specific skill sets to innovate, launch new companies and work in existing entrepreneurial firms.

The University of Pittsburgh, with more than 16,000 undergraduate and 8,000 graduate students, has a growing community of student entrepreneurs—innovative, creative, and motivated individuals seeking to create their own destiny and impact the world in which we live.

Through a vast array of hands-on, interactive programs Pitt Business supports these student entrepreneurs in growing their skills, building their networks and transforming them into the change-agents they strive to become.

The Institute for Entrepreneurial Excellence supports undergraduate and graduate students in any major that lead, or plan to lead, their own venture, envision working for a start-up business, or have an interest in new product development in a new or existing company.

Source: http://www.business.pitt.edu/katz/student-entrepreneurs

Considering the diversity among the academic world and the entrepreneurial world and the multifaceted nature of student entrepreneurship, it is not surprising that the entrepreneurial learning, as a subject of inquiry, was often characterized by controversial discussions about how to make sense of the state and how to develop it further.

Possibly, many university institutions have long been in a position to give an important contribution in the competitive challenge that every country has had to face in response to the processes of globalization and the most significant evolution of technology.

For years now, numerous collaboration initiatives with the world of production and with national and international entrepreneurial realities have characterized many universities that are committed to giving value to research both from the quantitative and the qualitative point of view, providing dedicated offices for the technological transfer, committing themselves to the training of potential entrepreneurs and seeking to create support structures for new enterprises and in the creation of spin-off enterprises (Hannon 2005; Hughes 2007).

Moreover, the last few years have seen an ever increasing commitment both in didactic activity (i.e. the teaching of students through more specific university courses) and in research activity (studies and research as well as forums and conventions) aimed at the themes of the start-up and the growth of enterprises (Metcalf et al. 2005).

Specifically, university teaching has seen and is seeing the continual increase in courses on the subjects of entrepreneurs and entrepreneurship that allow the

creation of an important reservoir of potential entrepreneurs as well as high level human capital (Nabi, et al. 2006). In addition to this is the presence of numerous centres for entrepreneurship within the same academic institutions, analogous those existing in the main American universities for years.

Thus, betting on the quality of didactic and scientific production, in dialogue with the institutions present on the territory and with enterprises, the universities are constructing possible motors of economic development for the country and sources for the spread of entrepreneurship in their areas of influence. These institutions also give a strong contribution to the development of new enterprises, providing and favoring the introduction of innovations and of new product technologies, amplifying their range and qualitative differentiation (Saxenian 2006).

The chance for the universities to feature as actors in the economic development of a country through the offer of educational and training activities, the transfer of technology and the supply of services to enterprises in the start-up phase has brought many to concentrate their research efforts on the relationship that links these institutions to new entrepreneurship (Roberts 2004; Robertson 2002; Robertson et al. 2004a; b; Robertson and Wilkinson 2006).

For many years, the relationships between universities and enterprises has represented a classical theme in the analysis of economic theory. Efficient public institutions—like universities and research centers—constitute positive externalities for the system of enterprises, favoring creation and the competitivity; inefficient institutions, instead, can be a drag on enterprises, reduce the processes of start-up, delaying development and limiting competitive capacity.

2.3 The Value of Social Capital as an Institutional Resource

To analyze the role that the universities play in the cooperation for the development of new entrepreneurship the elements that characterise—or at least should characterise—the latter and the new instruments and new strategies to activate and capable of being activated we shall concentrate our attention on some aspects, amply debated in the literature, belonging to the study of social capital.

Bourdieu: ‘Social capital is the ‘the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition’ (Bourdieu 1983: 249).
Coleman: ‘Social capital is defined by its function. It is not a single entity, but a variety of different entities, having two characteristics in common: they all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure’ (Coleman 1994: 302).

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Putnam: 'Whereas physical capital refers to physical objects and human capital refers to the properties of individuals, social capital refers to connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called "civic virtue." The difference is that "social capital" calls attention to the fact that civic virtue is most powerful when embedded in a sense network of reciprocal social relations. A society of many virtuous but isolated individuals is not necessarily rich in social capital' (Putnam 2000: 19).

Social capital has aspects on both the individual (micro) (Bourdieu 1980; Erickson 1996; Flap 1999, 2002; Lin 1999a; 2001) and collective (macro) level (Coleman 1990; Putnam 1995a, b).

The concept of social capital (Coleman 1988; 1994; 1990; Foley and Edwards 1999; Becker 1974; Putnam 1993; 1995; Portes 1998; Liao and Welsch 2003; Adam and Roncevic 2003), the first definition of which can be ascribed to Jacobs (1961), has been widely debated in the social sciences (Hall 1999; Sandefur and Laumann 1998; Zukin and DiMaggio 1990; Tsai and Ghoshal 1998; Nahapiet and Ghoshal 1998; Baron and Markman 2000; Liao and Welsch 2005) and in studies of an entrepreneurial nature (Johannisson 2000; Abell et al. 2001).

According to Light and Dana (2013, p. 14) "the business literature has been content to address the contribution of social capital to entrepreneurship in cultural contexts that support entrepreneurship. This methodological limitation has obscured the supporting role of cultural capital. Cultural habitus identifies occupations that are appropriate for group members. If a group's cultural capital does not support and endorse the selection of entrepreneurship as a vocation, then the group's strong social capital will not encourage entrepreneurship of group members"

As argued above with reference to the knowledge base of the economy, the key is to examine how knowledge and beliefs are shared in the relation among individuals, for that analysis will help determine how entrepreneurial actions are initiated and enacted.

We consider social capital as a relevant resource for entrepreneurial action, on a par with the other forms of capital like financing, material and human capital, and able to guarantee the entrepreneur access to otherwise unavailable material and immaterial resources.

The issues of investing in the creation of new human and social capital assume heightened importance for scholars who are seeking to understand the factors, conditions and processes facilitating and inhibiting the acquisition, creation and use of knowledge in societies.

The theme of knowledge resource mobilization that involves all institutional sectors (toward the efficient allocation of resources) raises an important question concerning the ability of the educational system, in a context in which knowledge

transfer may be problematic, to discipline the entrepreneurial behaviour. The problem is not, therefore, to provide "risk capital and/or credit capital" to businesses, but rather whether the knowledge resources and the paths of its availability as a factor of production are an effective element of growth and under what conditions.

In fact, development implies strong mobilization of energies (entrepreneurial, cultural, social, political, financial) and makes sense only if it pursues specific and structural objectives, such as those related to strategic choices of innovation.

The development process on which our analysis is focused involves the use of resources and expertise from institutional actors promoting entrepreneurship with which strong coalitions are built, substantiated by repeated economic and organizational relations; such resources and skills are crucial for the business project that aims at achieving new far reaching goals.

The competitive and innovative potential of student entrepreneurship, if contextualized in an educational structure, shows criticalities concerning the quality and amount of the available resources, that inhibit strategic opportunities of business development. Leveraging entrepreneurial skills through knowledge resources means allowing the student entrepreneur to envisage development scenarios regardless of the availability of risk capital, and promoting, in this way, a wider range of investment opportunities.

According to this view social capital features as a network of ties (set of relationships) that allow access to resources (Nahapiet and Ghoshal 1998) and as a critical element for the development of the new entrepreneurship (Liao and Welsch 2005) and for the economic growth of a determined territorial context.

In fact, every entrepreneurial initiative is influenced by social relationships (Young 1998) and by the "benevolence" of the setting in which the entrepreneur is operating (Hayton et al. 2002), so that entrepreneurial action finds its foundation in the government of synergic interactions between the entrepreneur and his own context of reference from which he may draw a series of benefits able to condition his own activity (Tackey and Perryman 1999).

In its various meanings and decompositions, social capital exists as a resource if the actors operating in a determined context find advantages deriving from its existence and from the performances of the Institutions that operate in a specific socio-economic context. In particular the institutions, including the universities, constitute the "rules of the game" that every economic system establishes (North

Focus on Institutional Perspective: Rules, Behavior and Legitimation

In the contributions by Meyer and Rowan (1977), Zucker (1977; 1988), Granovetter (1985), DiMaggio and Powell (1983), and DiMaggio et al. (1991), organizational forms are not the result of a rational choice implemented in accordance with a theoretical model able to give directions in relation to measurable advantages and disadvantages of each alternative. In fact, managerial

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choices can be affected and influenced by the context, i.e. the set of ideas, values, traditions, customs, and beliefs that define its distinctive features.

The neo-institutional school, on the other hand, focuses on the processes of institutionalization, i.e. on the rise and operation in the long term of socially legitimate and persistent activities that characterize the organization of specific aspects of civil life.

A distinctive feature of the institutional model is the vision of the environment where the object of analysis has to be placed: Powell and DiMaggio introduced the concept of "organizational field", understood as an aggregate of organizations (institutional actors) that constitute "an identified area of institutional life, carrying out an uninterrupted action of training and control on the lives of the other entities" (DiMaggio and Powell 1983 p. 148).

The influence of the organizational field on the actors involved in it is remarkable: organizational behavior is the result of combined action of values, ideas and beliefs that originate in the institutional context (Meyer and Rowan 1977): the explicit pressure from institutions in the field generates homogeneity among organizational forms (institutional isomorphism) through processes aimed at identifying the one deemed preferable being perceived as legitimate, and therefore more suitable for the template consciously or unconsciously designed by the institutional actors in the field; thus, the institutional context creates a template (Powell and DiMaggio 1991; see also Greenwood and Hinings 1996), a roadmap for organizational design.

All the elements part of the organizational sphere are both subject and object of the tensions that occur in the field, and isomorphism is the consequence of this mutual pressure; in this sense, the process of institutionalization can be represented as the attempt of implementing a subset of procedures as a set of rules which are the basis of the fundamental parameters whose respect by the community is the measure and evaluation of the behavior of its members, and is capable of making them rediscover the sense of belonging to that particular community.

The strength or weakness resulting from an institutional behavior is related to the effectiveness of the dissemination of its rules among different subjects, as each one interprets the role of those rules through a system of rituals that are influenced by the intensity of the pressure of the institutional context from which they proceed.

and Thomas 1973) and create the conditions of the context and the relative supply of social capital where the entrepreneurial processes are seen.

The origin of the process of generation of such a resource is, therefore, also found in the presence and in the consequent performances of the institutions operating in a given context. According to this view social capital is considered the result of the institutional performances in a determined context. A context with a high institutional performance will be able to guarantee a greater rate of survival of

entrepreneurial initiatives, lower transaction costs and therefore a better allocation performance regenerating and increasing the supply of the very same social capital.

More specifically, it is thought that the universities, as institutions able to create and sustain the development of new enterprises in a specific context (Gibson and Smilor 1991), can guarantee the formation of such a resource, influencing entrepreneurial behaviour in terms of legitimation of the activity (Etzioni 1987), opportunities to be exploited, relationships that can be established and resources available for use. We have often seen that, with their activity and their performance, the institutions create the conditions of certainty (or low perceived risk) that induce people to allocate their own resources to choices of an entrepreneurial nature.

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Chapter 3
New Business Creation, Entrepreneurial Will and Need of Achievement

Elias G. Carayannis

3.1 Introduction

In conceiving of a possible model of *new business creation* we have seen that the causal explanation of the creation of a new personal initiative is connected to the creative will of a subject (promoting subject) who considers it the instrument or method of achieving his own objectives. In this way, we have identified how the first element of any start-up process is the presence of an "entrepreneurial vocation" and a creative "will of the entrepreneur" (Te Velde 2004; Casson 2010; Schienstock 2011).

For this reason we believe that the universities and research centers, directly and indirectly influencing the behavioral, motivational, psychological and social variables that characterize the entrepreneur, are able to stimulate the two factors just mentioned.

Often in the course of this work we have identified a positive correlation between the creative will of an entrepreneur and the context within which he grows and matures. As one of the natural places of formation and maturation of the personality and of the system of values of a potential entrepreneur, the university, like the family setting (Zimmerer et al. 2002), can influence his propension and will to start a new economic activity.

The strong system of incentives for new enterprises offered by universities, on the one hand stimulates the development and the commercialization of new products (in most cases of the result specific research activity) and on the other legitimizes and encourages entrepreneurial action (Krueger and Carsrud 1993; Krueger et al. 2000).

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Within the universities, especially in America, there is the presence of a system of incentives and relationships coming from structures like the associations of students and of ex-students and from centers for entrepreneurship that allow the entrepreneur to operate in a climate of shared values within a "context favourable to entrepreneurial initiatives" (Petretto 2009; Korunka et al. 2003; Lundström and Stevenson 2007; Henderson and Robertson 2000; Kirby 2006).

The possibilities for the potential entrepreneur of joining such networks influences both his character (in aspects like self-belief, propension towards risk and innovation, work ethic and intuition) and his needs (independence, self-realization, autonomy of personal satisfaction etc), aspects that are basic elements in the creation and the formation of his *entrepreneurial will* (Goss 2005).

For example, being part of a strong network of relationships a potential entrepreneur will feel more legitimized to initiate a new entrepreneurial initiative even in the knowledge of having to operate in situations characterized by a high level of risk, uncertainty and ambiguity and which, therefore, require a strong risk-taking *propensity* (Malach-Pines et al. 2005; Thomas and Mancino 2007; Madsen 2007).

The university context also has a strong positive correlation with satisfying the "psychological needs" of a subject, in particular with the need for realization or *need for achievement* (Chen and Lai 2010; Phelan and Alder 2005; Spence et al. 2011).

The chance of entering into contact with other entrepreneurs and the possibility of exchanging opinions and ideas during meetings with actual entrepreneurs, conferences, *workshops, practical project work and visits to local enterprises* offer the potential entrepreneur the chance of better understanding the setting where they intend to operate and consequently allow better perception of the feasibility of any initiative, thereby contributing to the development of the need of achievement and the entrepreneurial vocation.

The system of *legitimation networks* and relationships activated at university (Petretto 2009) therefore

- allows the creation of a climate of shared values and a context favorable to entrepreneurial initiatives and able to legitimize actions
- stimulates and legitimizes the creative will of the potential entrepreneur, influencing his character (self-belief, risk-taking propensity and innovation, work ethic and intuition)
- influences the psychological needs at the basis of entrepreneurial will and the need of achievement
- allows the creation of a network of contacts and relationships able to improve the perception of feasibility of the different initiatives that can be activated and to improve the evaluation of the various interfunctional implications that may derive from them.

Among the principal consequences of the continual evolution of the economic and competitive context is the great increase in the complexity of the policies of governance and management of businesses and an enormous rise in the level of strategic and operational uncertainty connected to entrepreneurial activities.

This situation has brought into the foreground the concepts of the economics of knowledge and of learning (Carayannis 1999; Carayannis et al. 2000, 2006; Carayannis and Alexander 1999; Carayannis and Campbell 2006; Del Giudice et al. 2011) and the economics of experience (Lawson 2007), and the recognition of the strategic relevance in intangible resources, in particular the human and intellectual capital. This has emphasised the role of the universities as subjects promoting the development of management models and practices for the management of knowledge, and as subjects able to help the formation of entrepreneurial capacities and culture (Chang et al. 2009).

For example, considering recent developments in Italy, we know that until a few years ago the small and medium businesses were growing, above all thanks to the abilities of the entrepreneurs to capitalize their experience, while in the current scene and future scene this characteristic alone, though remaining necessary, is no longer sufficient. The level of instruction of the entrepreneur, of his family, his collaborators and dependents, and the consequent possession of adequate managerial and organizational capacities are critical variables for every single business, and as such able to condition their future performance and strategies. For this reason education and training, both initial and continuing, can represent the fundamental levers of innovation in the entrepreneurial and productive system of the country, can improve the competitively of businesses and can give value to the professional capacities and managerial capacities of both the entrepreneurs and of their collaborators (Perren 2003; Peterman and Kennedy 2003; Pittaway 2000, 2005, 2009; Pittaway and Cope 2007a, b; Pittaway et al. 2009).

Many universities have already been operating for several years in the setting up university courses and programs for specific formation (*education and training activities*) (Kuratko 2005). These stimulate the "knowledge" of entrepreneurship and allow the development of the basic entrepreneurial capacities and abilities (Schultz 2002; Chen et al. 1998; Collins et al. 2006; Erikson 2002; Erikson & Nerdrum 2001; Finkle 2009; Finkle et al. 2007).

In America this phenomenon is already widespread, seeing its earliest appearance in the early 1930s in the campus areas of the university of Harvard and important expansion in the 1960s. In recent years there has also been an analagous phenomenon in other academic institutions, with an ever increasing effort on the part of universities to guarantee training offers more relevant (compared to the past) to the real needs of the economy (Lerner and Stern 2010; Taylor et al. 2008; Smith et al. 2006) and of the entrepreneurship characteristic of area (Braunerhjelm 2007; Di Gregorio and Shane 2003; Mai and Gan 2007).

The university education and training system also foresees orientation meetings with students, for them to get better acquainted with the reality of the world of production and entrepreneurship. The universities give the chance of participating in practical courses which often carry out research with results that become issues for reflection on the policy, organizational and management models of a company, and/or which give rise to forms of technological innovation (Hoppe and Ozdenoren 2005; Rothaermel et al 2007; Shane 2000).

All this contributes to the formation of the educational and academic background of the potential entrepreneur and to his acquisition of attitudes and abilities that, as previously observed, represent an important interpretative key for his creative will and his entrepreneurial culture (Washburn 2008).

From what has been said it is believed that the role and the activities carried out by the universities can allow the structuring of a learning process that allows the neo-entrepreneur to acquire *managerial competence* and *technical knowledge* useful for the identification and the definition of the entrepreneurial project and the business idea (Zaharia, and Gibert 2005; Pihie and Akmaliah 2009) and for the successive management of the business.

The changing nature of universities offers the chance to potential entrepreneurs to use important *opportunity and resource networks* able to increase the propensity towards innovation (technology-production, commercial and organizational) and to acquire the strategic, managerial, relational and cooperation skills indispensible for the solution of the problems that every entrepreneur has to face in the start-up phase (Ferriani et al. 2009; Vanevenhoven 2013).

Giving value to the results of scientific research has been one of the institutional responsibilities of the universities for many years, as part of their institutional role. The intensification of the links between research and technology has brought about the rise of a series of mechanisms of interaction and connection between organisms of academic research and non-academic research, both involved in the process of transferring the results of scientific research from producers to users: this is about what is defined as *activity technology transfer.*

In this sense the *Technology Transfer Offices* allow the transfer of knowledge from pre-competitive research to industrial applications.

Numerous universities have set up special offices to favor and strengthen the transfer of technologies and competences to the world of production: TTOs provide an important support to the scientific and academic community (Siegel et al. 2003a; Chapple et al. 2005) for an efficient protection and valuing of intellectual property, and of patentable and licensable research.

The commercialization of research projects promoted by university researchers trigger the identification of appropriate channels of public and private financing for industrial research. The chance of utilising a system of relationships and decisive help for the commercialization of the results of their research activity develops numerous national and international collaborations for activities of study and analysis of the mechanisms of technological transfer.

The coordination of the activity of technological transfer and relationships with businesses actives a specific network of relationships and contacts among experts.

A necessary, but not a sufficient, condition for systematically promoting the creation of university spin-offs is the support in providing services of assistance and in questioning of marketing new technologies, economic and financial analysis and planning.

The search for financial partners causes of using ever closer contacts between the university and the industrial setting, more decisive than ever in sectors characterized

by rapid technological changes and in which research is connected to the advancement of scientific and technological knowledge and its relative commercialization.

It is reasonable to claim that, on the part of universities, the setting up of special *Technology Transfer Offices* (Feldman et al. 2002) can offer potential entrepreneurs better identification and evaluation of the knowledge and the commercially relevant *know-how.*

3.2 Putting Learning into Practice

The gradual process of transformation of the productive system of the main industrialized countries has been accompanied by technological changes more and more oriented to the use of "*high and soft technologies*" and to the development of enterprises defined as "*science based*". A special characteristic of such enterprises is the high content of scientific and technological knowledge developed and sedimented over time, often deriving from the research activity of universities and centers of research. It is for this reason that for a number of years several universities have been operating for the creation and activation of services strictly connected to the development of the productive tissue and to the enterprises' gemmation in *hi-tech* sectors.

A particular way of creating this category of enterprise is that of *academic spin-off* (Ndonzuau et al. 2002), i.e. the process of the constitution of a new company with the objective of favoring technological transfer and the use of the results of research developed within a university and carried out by a teacher/researcher or university student (Clarysse et al. 2007).

The phenomenon has its roots in the last century and there are numerous examples of academic *spin-off* for which the successive development gave rise to the creation of industrial groups of large dimensions operating in hi-tech sectors.

The development of Silicon Valley itself can be partly attributed to initiatives of researchers who commercialized what was thought up and elaborated in their industrial and university laboratories (Florida and Kenney 1990; Hall and Markusen 1985; Lee et al. 2000; Kenney 2000). Also in the industry of biotechnologies the most recent developments are linked to the emergence of small enterprises created by academics who have transformed basic research activity into innovation (Yli-Renko 1999; Yli-Renko et al. 2001; Smilor et al. 1993; Stuart 1998; Audretsch and Stephan 1996).

In most cases the university spin-offs start within *science parks* and/or business incubators, i.e. within the territorial poles of economic and technological relevance and of industrial interest that are "fertile terrain" for the activation of initiatives in technological transfer aimed at business diversification and the development of new enterprises in the different *hi-tech* sectors.

Science Parks (or technology parks) allow the creation of a setting favorable to the management and the spread of innovation, to giving value to the results of research, to the transfer of technology and to the participation in the processes of

interaction and communication at a regional, national and international level (Vedovello 1997; Vedovello and Conceição 1997; Walker et al. 1997; Westhead et al. 2000).

By definition the economic development of the territory and the creation of new enterprises based on the use and the dissemination of scientific knowledge, of technologies and of innovations, represents the mission of the various *science parks* that always operate in close collaboration, and/or with the involvement of, the university institutions (Felsenstein 1994; Phillimore 1999; Phan et al. 2005). In the last few years the strategy of the universities of promoting and favoring the creation of aggregations of research for scientific and commercial ends has favored and is favoring the establishing of parks in many entrepreneurial and academic sectors, and that operate in numerous fields for the application of biotechnologies and *hi-tech*.

Because of this, it is believed that the creation and activation of academic spin-off (*Academic spin off activities*) can be an instrument that is effective for the realization of technological transfer towards the industrial setting and therefore to allowing the start of new enterprises in sectors of high technology.

In particular, academic spin offs can favor the industrial use of research results, facilitating the dialogue between research and business and promoting the technological development of businesses so as to contribute to their competitiveness.

In addition, academic spin-off allows potential entrepreneurs to use services, relationships and infrastructure made available by the incubators and/or science parks within which the new enterprises are located; the creation of a network of relationships and communications with subjects with differing and complimentary competences favor the development of spin-off processes.

Until a few years ago the start of an entrepreneurial activity from the world of scientific research was not a particularly common event, both because of the existence of a limited management culture and exploitation of the results of research and of intellectual property and because of the lack of structures and services able to activate and sustain the process of commercialization into an enterprise of a scientific discovery (Siegel et al. 2003b, c; Steinfield and Scupola 2008; Stuart and Thelwall 2006; Suvinen et al. 2010).

The initial phase of an enterprise represents an extremely delicate moment, during which the productive units are most vulnerable and exposed to a series of difficulties that are founded in the high costs of information, the lack of management capital and a reduced capability to access financial instruments.

Business incubators, venture catalysts and business accelerators, can be defined as bodies able to host new enterprises in their own spaces, assisting them in the development of entrepreneurial ideas, through the provision of services, technical assistance, competences, knowledge, financial assistance and also financial resources (Bøllingtoft and Ulhøi 2005).

There are several categories of Incubator (Autio and Klofsten 1998). In fact, distinction is made between *profit oriented* and *no profit oriented* incubators, between *university* and *corporate* incubators, etc. Here, and in successive parts of this work we shall refer to the category of no profit incubator defined as *University Business Incubator* that pursues the double objective of facilitating and supporting

incubated enterprises through providing services of assistance and reinforcement of the local economic situation, through the creation of businesses with high innovation. (Lalkara 2003).

Thus, we are dealing with structures that pursue the ends of stimulating the creation of new entrepeneurial initiatives and, at the same time, facilitate their survival and success through the creation of an organizational architecture that identifies an optimal combination and structure of resources and services to the advantage of the "guest" enterprises hosted (Soetanto and Jack 2011; Schwartz 2008).

The role of the universities in the creation and sponsorization of such structures (Peters et al. 2004) has had an important development in the recent years in all the world situations, offering businesses, as well as a series of basic services (logistics, channels of communication, financial consulting and marketing), the possibility of using the continual exchange of knowledge between the academic world and the industry, connecting, and linking the university institutions with the surrounding territory and intensifying the continual flow of technological innovations between research and applications, without interrupting them (Rothschild and Darr 2005).

The universities and research centers have strong motivation in establishing their own incubators and in collaboration with others that exist on the territory (Taylor and Thorpe 2004; Tötterman and Sten 2005). This enables them to increase their own income thanks to state subventions and returns from functioning enterprises. Particularly interesting is that incubators intensify technological transfer and universities relationship with industry and introduce an entrepreneurial mentality within their research laboratories. Moreover, incubators participate actively in local development and improve universities' image, with the scope of attracting a greater number of students, qualified teachers, collaborations with business, etc.

In parallel the entrepreneur shall also be advantaged by the presence of these structures, a primary origin of *resource networks*, and be able to reduce the high costs connected to the setting up, running and administration of a start up enterprise (Petretto 2009).

- use a network of contacts and relationships of a certain impact throughout the process
- develop entrepreneurial competences in people who are characterized by high technical knowledge and innovative capacity for products, but that have little management ability
- access and find new capital and different forms of financing, thereby reducing the common problems of undercapitalization that characterize new enterprises

3.3 Universities Institutions and Entrepreneurial Initiatives

In addition to their entirely institutional role, for many years the university institutions have predisposed a series of activities and initiatives aimed at creating a network of relationships, access, connections and resources between people, businesses

and other institutions. Some of these activities, can be seen in their details as the source of networks of relationships that allow the entrepreneur to operate in a climate of shared values and within a "context favorable to entrepreneurial initiatives" (Young 1997; Zeithaml and Rice 1987), legitimizing and facilitating the undertaking of various possible entrepreneurial projects. Stimulating is the question: *how some specific activities promoted by the universities are able to legitimize and encourage entrepreneurial action*, influencing those behavioral, motivational, psychological and social variables that are at the basis of e*ntrepreneurial will?*.

Some specific initiatives and activities promoted within the university system can, in fact, activate a network of relationships able to stimulate the creation of this desire and that of entrepreneurial vocation (*wish of entrepreneurship*) that, together with the possession of specific entrepreneurial skills, transform an "*unmotivated entrepreneur"* into an "*entrepreneur with success potential."*

The activation of these networks can have different sources and different natures (Weihe and Reiche 1993; Tan et al. 1995; Solomon, and Fernald 1991):

1. the presence of *centers for entrepreneurship* within university structures
2. the presence, within campus universities, of extracurricular activities that feature the *associations and clubs of students and ex-students* (with particular reference to those occupied in the development and in the realization of activities of a management and entrepreneurial nature) as well as sports, cultural events etc. (Seiler and Seiler 2000; Cox and Goff 1996).

These are activities that, as we have said, have an impact on the entire process of *new business creation*, and in particular in the first two phases that we have identified: that of the *entrepreneurial concept* and that of *pre start-up activities.*

3.3.1 Centers for Entrepreneurship

In the main American universities the management, organization and promotion of training, teaching and research activities on the subject of entrepreneurship is promoted by the *Centers for Entrepreneurship*.

"The Center for Entrepreneurship and Innovation is a young initiative that is focusing and expanding the work on entrepreneurship and innovation at Fuqua. Conducting world class research and integrating it into our educational program is the hallmark of the Center for Entrepreneurship and Innovation at Fuqua. The center is contributing both to the advancement of knowledge and the practice of entrepreneurship. The center is creating the momentum to place Fuqua among a small handful of business schools known

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for both research excellence and a world-class educational experience for MBA students in entrepreneurship and innovation that combines experiential and research-based learning". (http://www.fuqua.duke.edu/centers/cei/).

"The Johnson Center for Entrepreneurship & Innovation offers one of the most comprehensive entrepreneurship curriculums in the world, whether you are a student at the Ph.D., M.B.A., or undergraduate level. Headquartered at the Kelley School of Business, our nationally-ranked academic programs provide you with a wide range of real-world entrepreneurial experiences through cross-campus initiatives with other university departments and involvement with the business community." (http://www.kelley.indiana.edu/jcei/).

"The goal of Saint Louis University's Entrepreneurship Center is to help entrepreneurs combine their business passion with the planning skills taught in a world-class institution, to produce high-performing organizations. Our mission is: to deliver and develop world-class entrepreneurship education for all" (http://business.slu.edu/centers-of-distinction/center-for-entrepreneurship/).

"Arthur W. Buerk Center for Entrepreneurship. The Buerk Center promotes entrepreneurship to students across the University of Washington campus and beyond. Our students become leaders who challenge the status quo and change the way business is done. The Buerk Center brings students from many disciplines together in the classroom and provides the framework and incentives to convert their ideas into thriving businesses. Over 70 businesses have launched as a result of our academic and practical experience programs". (http://www.foster.washington.edu/centers/entrepreneurship/Pages/entrepreneurship.aspx).

These take the form of "*hubs for entrepreneurial activities*" and represent the epicenter for all the different categories of activity on the subject of entrepreneurship promoted by the universities themselves.

"The Skandalaris Center for Entrepreneurial Studies is a campus-wide initiative that serves Washington University in St. Louis and the broader St. Louis community. The Skandalaris Center reports to Chancellor Mark S. Wrighton, who has charged the Center with igniting entrepreneurial interest and learning in all disciplines including business, law, physical sciences, social sciences, art, architecture, engineering, medicine and social work. The center is the hub of entrepreneurial activity on campus, working to build an innovation environment in the seven schools of the university where ideas and people can connect and cause action that changes lives". "https://sc.wustl.edu/about/Pages/default.aspx).

As one may see from the examples shown above, there are two common objectives of all the *Entrepreneurial Centers*: the offer of teaching and training programs with reference to the entire *life-cycle* of the entrepreneurial activity and the creation of a *community of links* between academics, students, the world of business. All the activities promoted ensure the entry of the potential entrepreneur into a *global network* and a *system of alliances*, made of relationships, contacts, exchanges of ideas, and activities of study and research.

The system of networks is also reinforced by numerous *alliances, partnerships* and collaborations with the other centers of research and with specific structures (like the *United States small business association*) in this way offering complete assistance to potential entrepreneurs.

And finally, the close collaboration of the *entrepreneurial clubs* present within the universities themselves for the programming and promotion of events (like meetings with *venture capitalists* and *business angels*, brainstorming for the formation of new entrepreneurial ideas, training activities and practical activities for the realization of a business plans) favors the proliferation of entrepreneurial initiatives, legitimizing them and sustaining them.

In fact the students themselves can enter a real *community* that keeps them in contact with and in a working relationship with professors and the world of business, guaranteeing that connection between people, ideas and resources necessary for the start of any entrepreneurial process.

3.3.2 Extracurricular Activities and Student Associations

The term *extracurricular activities* is used to describe all those activities offered within the university and includes clubs, associations, sports and cultural organizations, confraternities and *campus events*. The objectives pursued vary with the variation in the type of extracurricular activity but a common element is the offer of a series of activities, be they sports cultural, recreative or of another type, aimed at favoring the creation of relationships and contacts between the students and of offering the chance of using services, assistance and facilitations throughout the period at university.

The offer of such *extracurricular activities* is an extremely widespread phenomenon in the American situation, being present in the most varied forms and with varied scopes in almost all the colleges in the USA.

Paying more of our attention to the *associations of students and ex-students*, it is necessary to state that these have the specific objective of proposing programs and projects on various topics conceived in close collaboration with teachers and the university institutions themselves.

Columbia College Alumni Association

The Columbia College Alumni Association (CCAA) is a powerful network of over 45,000 alumni and is the official voice of Columbia College graduates. The purpose of the CCAA is to increase awareness and commitment to the College's mission and priorities, and help our alumni see themselves as stakeholders and lifelong members of the Columbia College community.

The CCAA connects alumni to the College and each other through specialized programming aimed at keeping alumni involved and engaged in the social and intellectual life of the College. As the representative body of College alumni throughout the world, CCAA shall seek to support and counsel the President of Columbia University and the Dean of the College, and shall play an active role in the establishment and maintenance of communication links among College students, faculty, administrators and alumni.

Members support the College by taking leadership roles, organizing and supporting fundraising efforts for College, mentoring students, and participation in alumni recognition events such as the Alexander Hamilton Award and John Jay Awards Dinner.

Source: https://www.college.columbia.edu/ccaa/content/columbia-college-alumni-association.

International Student Associations at the University of Groningen

Their activities range from providing useful information and fun activities for foreign students to organising international congresses.

AEGEE, Association des Etats Generaux des Etudiants de l'Europe	AEGEE is an interdisciplinary student association, which promotes a unified Europe, cross-border co-operation, communication, integration among students.
African Student Community	African Student Community
AIESEC	AIESEC facilitates international exchange of students and recent graduates. In a paid traineeship or as a volunteer for a non-profit organisation.

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ALAS: Association for Latin American Students Groningen	Founded October 2010. Open to all students from the University of Groningen from Latin America and those students from other countries who are interested in the continent. The current board consists of four students, from Mexico, Argentina and Peru. ALAS offers a social and cultural network. In addition, it is a perfect point of reference for those who consider to come study in Groningen.Join our groups on Facebook!
British and Irish community in Groningen	A page dedicated to the British and Irish Community in the Province or City of Groningen, Netherlands.
Chinese Students Association Groningen	Association for Chinese students and scholars at the University of Groningen.
ELSA (European Law Students Association)	European Law Students Association - an organisation for law students and young lawyers in Europe and therefore also active in the Netherlands.
ESN-Groningen	ESN is the organization that takes care of all the international students coming to the University of Groningen and promotes studying abroad to Dutch students.
Groningen Indian Students Association	Association for Indian students of the University of Groningen and the Hanzehogeschool.
GUTSA (Groningen University Turkish Student Organization)	Association founded by Turkish students of the University of Groningen that organizes events for everyone interested in Turkish culture.
HOST-Groningen	Hospitality for Overseas Students, Groningen. A Christian organization that provides useful information and fun activities for foreign students and other international newcomers.

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IFMSA	International Federation of Medical Students' Associations. The IFMSA is represented in 98 countries and organizes internships, congresses, workshops, lectures and a lot more.
Jong Atlantisch Samenwerkings Orgaan Nederland (JASON)	The aim of JASON is providing students a wider understanding about issues concerning international security.
Nuffic	Netherlands organization for international cooperation in higher education. Their website offers information on several subjects: Development Cooperation, Internationalization, International Recognition and Certification, the International Marketing of Dutch Higher Education, and Nuffic as Organization.
PPI Indonesian Students Association	Organization for Indonesian students at the University of Groningen.
SIB-Groningen (DUNSA)	SIB-Groningen: An international student association also known as DUNSA (Dutch United Nations Student Association).
Teimun	The TEIMUN foundation is a recognized foundation. Its dual objectives are to raise international understanding and to bring students in contact with the workings of multi-lateral diplomacy in general and the United Nations in particular. To realize these objects they organize The European International Model United Nations every year.
University Assistence Fund (UAF)	Information from UAF about the possibilities for refugees and asylum seekers to study and find work in the Netherlands.
Vietnamese Students Association in Groningen	Vietnamese Student Association in Groningen: Community, connection, exchange of all information related to learning and life in Groningen and around the world for Vietnamese students who were, are and will be studying and working in Groningen.

Source: http://www.rug.nl/education/find-out-more/extracurricular-activities-associations/international-student-associations.

A lot of colleges also have internal organizations and associations centered on the specific field of entrepreneurship (*entrepreneurial clubs and entrepreneurial associations*).

The *entrepreneurial associations* started out as organizations interested in the promotion of interdisciplinary cultural activities on the specific aspects of entrepreneurship able to favor the comparison of ideas and the maturing of intellect, thereby integrating with university training. There are, for example, cycles of conferences and of meetings with teachers, professionals and personalities from culture as well as series of other events that allow contact with the worlds of entrepreneurship, of businesses and of work (Pohthong and Trakooldit 2013).

Entrepreneur Association (EA) at the UCLA Anderson School of Management

The Entrepreneur Association (EA) is the largest student organization at the UCLA Anderson School of Management and offers its more than 800 members a wide range of extracurricular activities, from networking events to experiential learning opportunities. As the largest-student run organization on campus, the EA takes advantage of its vast resources to put on 100+ events per year—or an average of more than three events per week. These include speaker series on entrepreneurship, hands-on workshops, intimate networking events with successful entrepreneurs, a world-class business plan competition, and a conference at the end of the year. In addition, the EA works closely with the Harold and Pauline Price Center for Entrepreneurial Studies. The Price Center provides curriculum, research, and experiential learning programs that prepare M.B.A. candidates for the challenges of management in entrepreneurial environments.

Source:http://www.anderson.ucla.edu/clubs-and-associations/professional/entrepreneur.

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Part II
Customizing Academic Resources to Graduate Entrepreneurial Specificities

Chapter 4
The Role of New Technologies in Re-inventing Educational Paradigms

Maria Rosaria Della Peruta

4.1 Digital Natives/Immigrants, Net Generation, Millennials….What Else?

> If we had to sum up the outcome of our work in a single message it would be to advocate caution to all those arguing that universities and academic staff have to change to accommodate a new Net generation of Digital Native students. The new generation of students show significant age related differences but the generation is not homogenous nor is it articulating a single clear set of demands. It seems to us that universities and academics are, as always, faced with choices about how to change and these choices need to be better informed about the kinds of students that are entering their institutions (Jones et al. 2010a, p.731).

Younger generations can be distinguished from their parents and teachers because they have grown up with digital technology, from the first computers to the Internet and all the different communication and entertainment devices, such as mobile phones, iPods, iPads and game consoles. The relevant literature has used several terms to express this idea from the phrase "digital natives/digital immigrants" (Prensky 2001a, b, 2009, 2010; Palfrey and Gasser 2008) to the terms "Net generation" (Leung 2004; Oblinger and Oblinger 2005; Tapscott, 1998), "Millennials" (Howe and Strauss 1991, 2000, 2003), "Generation Y" (or Google Generation) (Jorgensen 2003; Weiler 2005; McCrindle 2006) and "Generation M(edia)/(ultitasker)" (Roberts et al. 2005).

Although each definition will vary depending on the researcher's interests, in general the terms are used interchangeably.

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Millennials

In 1991, Howe and Strauss released their book *Generations: The History of America's Future, 1584 to 2069*. The authors posit the history of America as a succession of generational biographies. Their theory is that each generation belongs to one of four types, and that these repeat sequentially in a fixed pattern. In this book, the term "Millennial Generation″ was first used; Howe and Strauss state it was born between 1982 and 2000. It came after the "Generation X″, born between 1961 and 1981, but it is not associated with it. A later publication, *Millennials Rising: The Next Great Generation* (Howe and Strauss 2000), established a direct connection between the generational hypothesis and the student population, because in the year 2000 students born in 1982 or later started to leave schooling and access higher education. There was quite a difference between the Generation X and the "Millennials″; this can be explained in part as the effect of a wide historical cycle, but also as the outcome of a set of historical circumstances, and timing. Howe and Strauss described the "Millennials" as "optimistic, team-oriented, high-achieving rule-followers" (2003 p. 1). The Millennial Generation is often viewed in terms of new technologies, however it is also expression of a long term historical process based on biology and culture. The Millennials are only the most recent type of the recurring Civic Generation, that is described as heroic, collegial and rationalistic. The fundamental values of community and technology are included in the recurrent features of this generational type.

Based on Howe and Strauss' concept of the "Millennials", Oblinger (2003) absorbed the concept of "Millennial Generation" coined by the two authors, and carried out his personal analysis stating that the new features had generated an imbalance between what the students expected from their learning environment and what was practically provided by colleges and universities. Consequently, the latter had to better comprehend the new needs of their students, and design programs and courses that were consistent with their new way of learning. Based on Howe and Strauss' arguments, Oblinger suggested that the "Millennials" emerged "in or after 1982" (Oblinger 2003 p. 38). Nevertheless, Oblinger and Oblinger (2005 section 2 p. 9) stated that the "Millennial Generation" ended in 1991, so the students who accessed higher education in the academic year 2009–2010 were its ultimate expression. Oblinger and Oblinger (2005) definitely start from Howe and Strauss' theory, and despite being careful when making their statements, they link the Civic Generation, discussed by Howe and Strauss themselves, to the Net Generation described in relation to the role of technology. According to the scholars, the different generations are delimited by sharp boundaries; turning points appear in single years, so it is possible to assume that young people's attitude and behavior can change considerably just in a few years. Nevertheless, Oblinger and Oblinger also realized that while they were explaining these trends in

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generational terms, they were highlighting the importance of environmental elements, especially those related to technology. Thus, they concluded that for changes in the student population: "age may be less important than exposure to technology" (2005 p. 20).

> Many books and articles have been written about the psychological characteristics of Millennials. Although we should be careful about over-generalizations, Millennials are often described as feeling special and may have rooms full of trophies from competing on the playing fields, even if they didn't win any contests. They are also frequently described as being spoiled, wanting work to be fun, and valuing friends and lifestyles over work and career. In contrast to boomers who felt they had to make their way through life on their own, many Millennials put a greater emphasis on collaboration with others and sharing work assignments, a change that reflects the more collaborative learning experiences they had in the lower grades (Nevid and Jaramillo 2011, p.54).

Net Generation

In 1997, Don Tapscott, a consultant specializing in business strategy, organizational transformation and the role of technology in business and society, released his book *Growing Up Digital: The Rise of the Net Generation*, that offers an overview of the new generation of children who in the year 2000 would be between the ages of two and 22. He discussed, in particular, about the social and business impact of the new digital generation that he called "Net Generation". The reason why Tapscott coined this term was because that generation grew up with information technology, surrounded by personal computers, the Internet and other digital media. The author observed that Net Generation students would have soon accessed university and started to question the traditional types of learning and teaching, demanding a change.

In his latest publication on the subject (2009), Tapscott gave dates for the beginning and end of the Net Generation stating that it embraces those born between January 1977 and December 1997. Tapscott argued that there had been important changes in the way students approached learning, and this led to the generational shift. In fact, Tapscott realized that significant technological changes had inevitably affected learning. Especially due to the expansion of the Internet, education had to change its traditional teacher-centered approach and adopt a learner-centered approach. According to Tapscott, the former is a model of education in which knowledge is directly transferred from the teacher to the student, while the latter focuses on the activities performed by the individual learners.

Hence, in Tapscott's view the Net Generation was the result of technological change, but the author also declared that the young people who were part of that generation were like a "tsunami" that could force changes in communications, retailing, branding, advertising, and education, especially higher education.

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According to Kennedy et al. 2010, p. 340 "the so-called Net Generation has instead been shown to possess a diverse range of technology skills and preferences… First, Net Generation students are far from homogeneous. Clear differences in their patterns of technology use can be established, allowing us to describe different types of users. Second, the individual technologies that any given student uses or has experience with are difficult to predict. In particular, experience with one technology cannot be reliably used to predict experience with another. Third, there are a number of demographic variables other than age that may predict a student's technology experience; these include gender, university and cultural background. Taken together, these findings provide further impetus to move beyond debates about 'Natives' and 'Immigrants' by seeking more sophisticated understandings of how students' use of technology can impact on learning and teaching in higher education".

Digital Natives/Digital Immigrants

An interesting debate started by Marc Prensky in 2001 (Prensky 2001a; b) compares "Digital Natives" to "Digital Immigrants" in relation to the adoption of new technologies by students and the response by educators and institutions. In summary, this debate points out that "Digital Natives" of the "Net Generation" have a great familiarity and sophistication with technology. This level of proficiency has considerably influenced students' expectations regarding the best way to learn, how educators should teach and the role of technology in this context. Conversely, "Digital Immigrants" do not embrace technology at the same speed, so their way of teaching is deemed not consistent with the expectations of their "Digital Native" students (see Lorenzo et al. 2006; Oblinger 2003 and Tapscott 1998). In fact, in contrast to "Digital Natives", those who were not born in the digital world and had adopted many of the new technologies later in life were called "Digital Immigrants" (Prensky 2001a). Digital Immigrants did not view the new technologies as natural tools, but had to learn and adapt to using them. However, as claimed by Prensky, Digital Immigrants could even adapt well to the new environment, but they would not abandon their "digital immigrant accent".

According to Prensky, a sharp generational step had been made, and notable changes had been caused by the emergence of Digital Natives. Prensky argued that the whole generation could be identified with the change, since it thought in a different way. This generational change had been the result of a process of technological change. In his second publication, Prensky (2001b) also stated that Digital Natives had "physically different" brains to those of previous generations, since digital technologies had direct effects on them. This dissertation does not include this point of view, but for an interesting analysis of how the use of technology may affect the brain it is possible to resort to Bavelier et al. (2010).

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Prensky was also concerned about the deep generational gap between Digital Native students and the technological literacy of their Digital Immigrant educators, to the point that he claimed that this generation gap was "the biggest single problem facing education today" (2001a p. 2). The teaching practice at the time was not compatible with the features and learning preferences of Digital Native students. When Digital Natives accessed higher education, educators would inevitably have to change their way of teaching so as to satisfy the needs of the new generation of learners (Prensky 2001a). Both Tapscott and Prensky followed a determinist line of discussion that led to argue that technological change caused automatically a significant change in generational features so the Digital Natives would become the motor of further change. The change described by the scholars could be basically found in education and especially in higher education institutions.

Based on Prensky's definition, it is possible to claim that most teachers in K-12 schools today are "Digital Immigrants". The relationship between teenagers, who act as "Digital Natives", and their teachers, who act as "Digital immigrants", has been object of intense discussion in literature. From a general point of view, many researchers believe that "Digital Natives" are completely different from those who preceded them; they have a high level of technological proficiency, they are skilled in multitasking and open to experimental learning. On the contrary, their teachers, who are "Digital Immigrants", do not have the same level of digital competencies (Frand 2000; Gaston 2006; Levin and Arafeh 2002). Thus, educational systems should be totally altered in order to comply with the new learning styles. However, other scholars think that "Digital Natives" may not always be as skilled as generally believed, and they do not necessarily know everything regarding the way technology may be utilized for learning purposes (Bennett et al. 2008; Kennedy et al. 2006). Most "Digital Natives" know the way a videogame can be downloaded from the Internet, but the real features of this new generation have not been sufficiently analyzed. Furthermore, their digital literacy has not been properly investigated due to the lack of empirical evidence (Li and Ranieri 2010).

Prensky argues that in the future the way people use technologies effectively could be better described by the concept of "digital wisdom", because over time, as the digital culture becomes widespread, the differences between "Digital Natives" and "Digital Immigrants" will become less evident (Prensky 2009). This view is more in line with Warschauer's (2004) idea of digital divide, "and may provide a better conceptual basis for understanding differences between the way individuals use and perceive technologies" (Waycott et al. 2010, p. 1209).

Generation Y

Rowlands and Nicholas (p. 5) define the "Google Generation (Rowlands et al. 2008)" or "Generation Y" as "those born after 1993… a cohort of young people with little or no recollection of life before the web".

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The term Generation Y first appeared in an August 1993 AdAge editorial to describe teenagers of the time (Zhao and Liu 2008; Halse and Mallinson 2009) and distinguish them from those belonging to the Generation X that had preceded them. The term has been widely used, especially with regard to business and commerce, and it has been also absorbed in contexts in which the terms Net Generation or Digital Natives have never been adopted. Generation Y was made of the children of the "Baby Boomers", which identifies those born in the years following World War II. Researchers do not all agree on the exact dates when this generation started and ended, however it is possible to consider in general the period from the mid 1970s to the mid 1990s (Jorgensen 2003; Noble et al. 2008; Weiler 2005). Generation Y shows unique generational features since it grew up in a digital world while economy was expanding (Pokrywczynski and Wolburg 2001). These peculiar characteristics include a positive attitude towards change and a high propensity towards networking and collaboration (Chen 2008; Noble et al. 2008; Tulgan and Martin 2001). As pointed out by Huntley (2006), digital devices such as PCs, cell phones, iPods and game consoles were viewed as symbols of generational identity, and not as mere communication tools. Trends indicate that firms offering incentives and career path flexibility will appeal the most to Generation Y members (Tulgan and Martin 2001).

Also in mainland China young people have been identified with Generation Y, however, it is not possible to assume that in this country the term has the precise same meaning as it would elsewhere, due to the unique features that characterize the generational discourse in the specific context (Zhao and Liu 2008; Chen 2008).

4.2 Educational Usability of Web 2.0 Technologies

Since they have grown up with technology, it is evident that digital natives are more comfortable with it than previous generations (Hargittai 2010a, b; Jones et al. 2010a, b). As generally highlighted by educators, digital natives have a different way of learning and utilizing technology from their parents and teachers (e.g., Lei 2009; Beck and Wade 2004; DeDe 2005; Gee 2003; McHale 2005; Oblinger and Oblinger 2005; Prensky 2001b; Bennett et al. 2008; Palfrey and Gasser 2008).

> It is argued that the existence of the digital native makes dramatic educational reforms necessary because traditional education systems do not, and cannot, cater for the needs and interests of young people. As a result, outdated schools and universities and outmoded teaching simply alienate students from learning, leaving them disengaged and disenchanted by education's alleged failure to adapt to the new digital world. By implication, education must be transformed by technology, coupled with new pedagogies. Although this argument is a familiar one to those acquainted with the broader educational technology literature, the digital native hypothesis provides a new basis for claims for revolutionary educational change through technology integration (Bennett 2012 p. 3)

Much investigation is being performed regarding the way Web 2.0 tools, such as blogs, wikis, and online forums, are utilized in education. For instance, Lai and Ng (2011) carried out a case study that was based on the application of wikis in two classes of information technology (IT) major student teachers: they were requested to create a wiki for teaching and learning ICT. The results showed that the creation of wikis helped the students improve different abilities, and, in particular, IT, collaboration and organizational skills. In a study by Muscara and Beercock (2010), it was proved that Web 2.0 tools, such as wikis, are very flexible from a pedagogical point of view. The scholars utilized a wiki in an experimental blended learning course entitled "Learning English with Films". The wiki was applied in the Moodle open source learning management system (LMS): the aim was to utilize it as a group project database organizer and presentation tool. As a result, non only a high level of online interaction among students was established, but also face-to-face (F2F) communication was enhanced, since students were willing to talk about their experiences. A literature review of empirical research concerning the utilization of blogs in Higher Education (HE) settings was carried out by Sim and Hew (2010). The scholars discovered that the most common research topics regarding the use of blogs in HE contexts pertain to two specific areas, blog usage profiles and the effects of blogging. On the one hand, research regarding the first category concerns the areas of study where blogs are applied or the way students and teachers make use of them. On the other hand, the second category, which relates to the effects of blogging, takes account of the performance and affective consequences of the use of blogs in educational contexts. Noytim (2010) carried out a study in which blogs were utilized in an English language learning course. This is an example of study analyzing the effects of blogging that had not been previously identified by Sim and Hew (2010). Noytim used both qualitative and quantitative methods, discovering that, by utilizing a blog, the students had improved their self-expression in English, their interest was generally enhanced, they felt more stimulated, and became more confident in writing.

Educators have realized that, besides blogs, the process of reflection in an educational setting can be supported by online discussion forums. For instance, Makoul et al. (2010), during a medical course, presented an online forum entitled "Difficult Conversations Online Forum" with the aim of increasing reflection and interaction among students with regard to their medical experiences. The findings indicated that the students deemed the forum as a practical collaboration and reflection tool. Online discussion forums have also been utilized in HE settings as a way to enhance students' performance. For example, a study carried out by Cheng et al. (2011) was based on the use of online discussion forums in an undergraduate introductory psychology course. The results showed that the students who performed the best in the course and final exam were those who had taken part in the forum.

Baggetun and Wasson (2006) identified cases in which the students took an active role in the learning process and decided on their own to utilize digital tools while studying. The scholars focused in particular on the cases in which students utilized weblogs interacting dynamically with them. Their aim was to understand the way the technology that allows to create a weblog and the contents generated by

the students could make self-regulated learning easier. Baggetun and Wasson realized that the students had developed a collective self-regulation, that is a collective conceptual understanding of a topic, made possible by the use of the weblog that allowed them to reflect on their own learning while having access to the reflections of others.

A study by Jones et al. (2010a, b) investigated the disruptive nature and opportunity of social networking for HE in order to better understand the student experience with social tools. The research selected four universities: first, it detected the distinction between the current levels of utilization of social software by students; then, it gave account of the opportunities and challenges experienced by students when using social tools to learn; finally, it identified some principles to be used as guidelines for the utilization of social software for learning purposes. The findings showed that educational technology was used heavily with a clear separation between the learning space and personal space. Most students declared that the main cause of such a separation was contrasting perception and experience of their lives as students on the one hand, and their social lives on the other. As pointed out by Jones et al., it is possible that online learning and social personas overlap, but it is important that learning requirements are devised so individual preferences are addressed in order to combine or divide the two domains.

In China weblogs are starting to be utilized in educational contexts, and this may open the path to a change in both learning and assessment. For instance, Chen and Bonk (2008) summarized two weblog studies that considered new modes to assess students' performance in China.

Bernsteiner et al. (2008) investigated the way social tools can provide support for innovative learning methods and instructional design in general, and those regarding self-organized learning in an Austrian academic setting in particular. The study found that social software can be considered a potentially adequate technology in a teaching and learning context.

Great discussion has arisen within the educational community about social networking sites such as Facebook and MySpace. Some educators believe that social networking has the potential to increase students' engagement in their studies; others, instead, think that social software distracts young people from the traditional means of education and reduces their commitment. Bearing in mind these divergent views, Selwyn (2009) performed an in-depth qualitative analysis of the Facebook "wall" activity of 909 undergraduate students in a British university. The findings revealed that the use of Facebook as an educational tool was based on different grounds; retrospective criticism of learning experiences, cases of supplication and moral support related to learning or assessment, exchange of information regarding teaching and assessment requirements, or indication of academic incompetency and disengagement. On this basis, the paper revealed that Facebook should be viewed as placed within the "identity politics" of being a student and not as a tool that inevitably increases or diminishes students' engagement with their formal studies. Facebook seems to be a "backstage" area where it is possible to solve the conflicts that often arise in the students' relationships within the academic environment.

While students are increasingly utilizing Web 2.0 applications, such as wikis, social software and text messaging, universities do not always keep the same pace. Research by Haya Ajjan and Hartshorne (2008) was aimed at detecting at what level universities were aware of the advantages of using Web 2.0 tools in the academic context; the authors also used the decomposed theory of planned behavior (DTPB) model to better comprehend how academic decisions regarding the adoption of Web 2.0 applications were made. The study revealed that while numerous academic members believe that Web 2.0 technologies may enhance learning by students, their interaction within the academic environment, their writing skills, and their general satisfaction, only few decide to adopt them in the classroom.

Exploring Entrepreneurial Projects in a Global Context

Ten years ago, connections between school communities at the global scale were limited if compared to the current situation, since cultural and geographic boundaries among students were characterized by a lower level of porosity. Luckily, there has been a notable evolution in personal and academic relationships linking students worldwide along lines that would have been previously deemed impossible. This incredible change has been enabled by a set of powerful tools students can use to get in touch with the world. Among these tools it is possible to cite as an example Twitter, blogs, videoconferences, besides a number of study abroad programs that have become quite common.

If it is true that communicational tools exist and make things easier, it is also true that synthesis is lacking, which could help students understand better the world they live in. The basic issue is realizing how students can grow as innovators by using those communicational tools to exchange ideas and experience. If a durable ecosystem of social improvement is to be constructed, it is pivotal that everyone is capable of understanding the setting in which change occurs. In order to grow inside, it is essential that we look outside and gather knowledge and experience. The question is: are students increasing their level of understanding through the use of the communicational tools at their disposal? The importance of such a synthesis becomes even greater, if we take into account those students who have almost concluded their academic path and are next to access the external world. This is particularly true in emerging economies, where future sustainable development may be guaranteed only by today's students.

At Altis Postgraduate School of Business & Society at the Università Cattolica del Sacro Cuore in Milan, a specific program has been developed and provided to students based in Nairobi who come from the entire sub-Saharan Africa. Through this program students can attempt to develop entrepreneurial solutions for African countries and communities. Twenty-four professional leaders from Italy, Kenya, and India make up the team, and the

(continued)

MBA program has been developed thanks to a partnership with the Tangaza College at Catholic University of Eastern Africa in Nairobi, Kenya, and the Loyola Institute of Business Administration in Chennai, India.

The students work on practical issues devising and implementing social business plans for their home countries and communities. Thirty-eight students from fourteen different African countries were the first to graduate. Students were driven by their creativity and passion for social good and elaborated a variety of social business initiatives. Among the worthiest proposals developed by the students it is possible to list the support of bio-fertilizer production in Ghana, the empowerment of coffee producers through the value chain in Uganda, and the manufacture of sustainable bamboo furniture in Ethiopia.

One student, in particular, developed a very interesting project that was based on sustainable tourism in the Volta region of Ghana. Local communities were involved and accepted to provide accommodation for tourists, receiving in return a share of the profits. Moreover, they agreed upon a common strategy for the protection of the natural environment. The student had a great success, also thanks to the different partners involved, in particular an Italian professor of sustainable tourism and a European travel agency. At the same time, through the social connections he had established locally, the student managed to perceive better the diverse needs of the High Volta Region. The student's start-up became operational in April 2013 and four permanent jobs have been created since then. In parallel, local communities have benefited from this experience in terms of training for local tourist operators. This project has been highly successful especially because of the partnerships in Ghana and Europe. A greater quantity and quality of information compared to what the student could have managed to gather on his own, improved and enhanced the sustainable tourism project, thanks to the development of a much deeper understanding at a global scale.

In March 2013, the Ashoka U Cordes Innovation Award was assigned to the Altis MBA Social Entrepreneurship and Management program, since it was deemed effective in providing students with the concrete opportunity of advancing sustainable projects useful to their home countries and communities.

Source:http://www.ssireview.org/blog/entry/entrepreneurial_synthesis_in_higher_education

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Chapter 5
Open Source Environments in Education: Beyond Virtual Learning Environments

Maria Rosaria Della Peruta

5.1 Students, Learning and Web 2.0

The possibility of creating and sharing content on line is given by a set of tools that allow to use the Web as if it were a normal application.

Basically, Web 2.0 has become a place where it is possible to find free services that were previously offered only by packages to be installed on individual computers. The content created can be published immediately, classified and finally indexed in the search engines so that the information is immediately available to the entire community. Contributing strongly to dialogue and knowledge, Web 2.0 can be fully exploited for learning (Churchill 2009; Ravenscroft 2009; Brown 2010; Lytras and Ordonez de Pablos 2009).

> In the past 10 years, Web access, the nature of the Web, and contexts for learning have been transformed, along with the emergence of desired technological competencies for learners, teachers, and administrators. Internet connectivity in schools, homes, neighborhoods, and communities has become increasingly pervasive (Greenhow et al. 2009, p. 246).

The use of blogs, wikis and participatory technologies has enabled a quality leap also in education allowing for the creation of open and flexible learning environments, breaking down the boundaries of space and time and contributing to the dissemination of knowledge. Students (and no longer the formative offer provided) are placed at the center of the educational process and become active participants; they themselves are builders of knowledge. Thus, each individual can contribute to the construction of content and share it with others interactively.

The new website and interaction tools may in turn have a notable impact on education and learning methodologies, revolutionizing the models, methodologies and tools of traditional teaching.

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> …technologies only become learning tools by acts of meaning-making brought about by the users. While tools like blogs and wikis make possible the 'educational transaction' by collaborative sharing and construction of knowledge across time and space, at the same time, they potentially create barriers around lack of linearity of information presentation, distributed storage across a myriad of locations and resource banks, and lack of indexing and linking as well as of systematicity of classification of information. Resources and information are generally much more ephemeral and less structured, available in non-traditional formats only and presented in adherence to new conventions which pose challenges in relation to their reliability and validity (Pachler and Daly 2009, p. 7).

The quality leap is achieved, however, only if the interpretation of knowledge understood as a symbolic representation of an objective and measurable world external to the learner is to be abandoned (behaviorist approach). This idea must give way to a concept of knowledge understood as the result of the students' experiences, or more precisely as the result of a process of construction, both individual and collective, of arranged meanings and non preconceived interpretation of experience (constructivist approach) (Ertmer and Newby 2013).

> As one moves along the behaviorist–cognitivist–constructivist continuum, the focus of instruction shifts from teaching to learning, from the passive transfer of facts and routines to the active application of ideas to problems (Ertmer and Newby 2013, p. 58).

Therefore, the use of digital technologies in learning may allow to overcome the old generation theoretical paradigms aiming at a fusion between knowledge and social component, and facilitating the transition from information society to knowledge society (Bejjar and Boujelbene 2013; McLoughlin and Lee 2007; Kesim and Agaoglu 2007). Students may be placed in a position to make use of flexible learning solutions: they can choose their educational path, and create content to share. The communication flow breaks down the learning object and then reassembles it through a collective elaboration made possible by the new participatory technologies. In this sense, collaborative learning becomes very important, since it allows the growth of the individual according to the goals shared by a team: everyone learns together and individual learning becomes the result of a collective process (Del Giudice et al. 2013).

The change of the theoretical paradigms, which resulted in general acceptance of the constructivist principles, has also led to changes in teaching practices, including the gradual replacement of old platforms (Virtual Learning Environment, identified as LMS or LCMS) with the new Web 2.0 technologies (Liu et al. 2003; Craig 2007; Sife et al. 2007; Driscoll 2010; Khan 2005; Chatti et al. 2007); a Web itself conceived as a platform. In fact, the traditional formula of online learning (the classical learning system of LMS platforms) no longer works. It was built according strictly to the concept of Learning Objects, therefore to make content public it uses platforms that are not open source, and where the interactive areas are rigid and controlled from above. This way of utilizing the Web for learning purposes gave poor results, especially with the new generations of students, accustomed to the use of network technologies and for whom free dialogue is now a way of living and relating with others. In particular, online learning is really effective in the network itself, it is part of it.

Kaplan-Leiserson provides the following definition of LMS:

LMS (learning management system): Software that automates the administration of training events. The LMS registers users, tracks courses in a catalog, and records data from learners; it also provides reports to management. An LMS is typically designed to handle courses by multiple publishers and providers. It usually doesn't include its own authoring capabilities; instead, it focuses on managing courses created by a variety of other sources.

Hall (2001) presents this alternative definition:

A Learning Management System (LMS) is software that automates the administration of training events. All Learning Management Systems manage the log-in of registers users, manage course catalogs, record data from learners, and provide reports to management. There used to be a distinction between Learning Management Systems and more powerful Integrated Learning Management Systems. That distinction has now disappeared. The term Learning Management System is now used to describe a wide range of applications that track student training and may or may not include functions such as: • Authoring • Classroom management • Competency management • Knowledge management • Certification or compliance training • Personalization • Mentoring • Chat • Discussion boards.

Virtual Learning Environment (VLE): Virtual learning environment is a term that to some extent is used instead of LMS. The two terms have more or less the same meaning, but one may argue that VLE focus less on the features related to the management of learning. Bandon Hall (2001) defines learning environment this way:

A Learning Environment is software designed as an all-in-one solution that can facilitate online learning for an organization. It includes the functions of a learning management system for those courses within the learning environment, but it may not be able to track online courses that were not created within this particular learning environment. A learning environment is characterized by an interface that allows students to register and take courses, staying within that environment for the duration of the course. The program will usually include some self-instructional portions, along with an academic model of a multi-week course. This model is often facilitated by an instructor, where a group can proceed on a week-to-week basis with seminar assignments. Most learning environments also include an authoring capability for creation of additional courses for the instructor.

Keegan D (1988) On defining distance education. In: Sewart D, Keegan D, Holmberg B (eds.) Distance education: international perspectives. Routledge, London/New York: pp. 6–33

Hall B (2001) New technology definitions. www.brandonhall.com/public/glossary/index.htm

Kaplan-Leiserson E. E-learning glossary. http://www.learningcircuits.org/glossary.html

Source: Paulsen, M. F. (2002). Online Education Systems: Discussion and definition of terms. *NKI Distance Education*.

Thus, the new learning techniques must be built around Web 2.0 tools (O'reilly 2007; Gibson 2007): blogs, wikis, podcasts and any other device that allows users to communicate via the Internet. Learning must become learner-centered or student-centered. (McCombs and Vakili 2005; Hannafin and Land 1997; Weimer 2013; Dabbagh and Kitsantas 2004; Hirumi 2002; Land and Hannafin 2000).

This does not just imply a change in the interface of the old platforms, such as customizing the old LMS systems. Students have to take control of the learning process by using the tools made available by technologies, so as to create knowledge through the mash-up of multiple applications accessible via the Web. The use of blogs or wikis within classes, for example, would not only allow for open dialogue among all students, but it would potentially enable them to communicate with everyone outside. The possibilities and openness allowed by Web 2.0, intended as a platform, far outweigh the possibilities offered by a traditional community of practice (Kamel Boulos and Wheeler 2007; Boulos et al. 2006; Sigala 2007).

> Learning, in other words, occurs in communities, where the practice of learning is the participation in the community. A learning activity is, in essence, a conversation undertaken between the learner and other members of the community. This conversation, in the web 2.0 era, consists not only of words but of images, video, multimedia and more. This conversation forms a rich tapestry of resources, dynamic and interconnected, created not only by experts, but by all members of the community, including learners (Downes 2007, p. 23).

Hence in the first instance the tools that characterize Web 2.0 are communication tools. Communication tools support direct interaction between individuals. They provide an individual with a means of communicating with one or more members. "Thus, Web 2.0 tools foster interaction, collaboration, and contribution. An essential feature is user generated content enabling sharing, co-creating, co-editing, and co-construction of knowledge reflecting the collective intelligence of the users" (Gunawardena et al. 2009, p. 5).

The gradual disappearance of traditional Virtual Learning Environments, now considered ineffective, gives way to open source environments. Web 1.0 learning environments were primarily born to facilitate communication between users who participated in a shared educational process (usually remotely, but not only). The objectives of these platforms are mainly two: distributing educational materials in digital format and allowing communication between the participants, ensuring their access to and participation in the discussions on the topics of existing courses. Both the social and educational aspect of these systems have shown some limits. The majority of these platforms, for instance, tends to create closed containers that are not accessible to all students, but only few, due to a strict access control.

Thus, students are so often relegated to limited areas where it is not possible to customize their own space and even give rise to a truly free exchange of views and knowledge. Moreover, when a student completes a course, he often loses access to the online space because he is no longer registered, and therefore he loses contact with his colleagues and the possibility of accessing what he had worked on and shared. Therefore, this experience is often considered a parenthesis in the learning process, which is not intended as permanent but short-term. In these environments, the teacher, and not the student, is placed at the center of the educational process.

The former, in fact, can usually create and edit with the utmost freedom the virtual learning environments in which he operates.

In this kind of environment, an almost paradoxical situation may be established: students are encouraged to be creative, participatory and collaborative, but at the same time the platform restricts their movement. Thus, the learning context created by such environments can be similar to that of the traditional behaviorist school: the same content is transferred in the same manner to the pupils, and this leads to flattening and homogeneity, characteristics that have nothing to do with the paradigms of interactive and network teaching typical of the constructivist approach.

In fact, the very first applications of this type, about 10 years ago, allowed the establishment or marked improvement of certain types of education, such as that from a distance. These systems have been for a long time the dominant model, both in the corporate and academic context. Today, however, the need to make a change is increasingly perceived, moving from proprietary systems (private software with a charge) to open source. The main need seems to be learning customization. Many universities are in fact abandoning the use of commercial platforms to switch to open source systems such as Moodle (Modular Object-Oriented Dynamic Learning Environment), which represents indeed the evolution of the old VLE systems; it is an e-learning open source platform, designed to help teachers create and manage online courses with ample opportunities for interaction between students and teachers. Moodle has established itself over the last few years mainly because of its simplicity of use and the completeness of the features it offers to teachers, tutors and students. Among the reasons that favored this choice the main one is its high interoperability, that is the ability to integrate this tool with other applications.

This, for instance, recently allowed (in 2009) the integration of Moodle with Google Apps Education. The latter is a set of Web applications offered free of charge to educational institutions and non-profit organizations to allow students and teachers to work together at a distance on documents, scripts, and research. Google Apps has spread heavily in Italian and foreign universities.

In this way, Moodle added the possibility of organizing online courses and classes, and using tools such as forums, quizzes, blogs and wiki pages. Students and teachers, who until then had merely worked remotely sharing documents, scripts and research, may now have at their disposal a virtual interactive teaching/learning environment. Moodle has thus created a platform to support learning that is very close to Personal Learning Environments (PLEs).

These environments have the same purpose of VLEs, helping students check and organize their own learning, but they implement it in a different way. For example, the Future Virtual Learning Environment consists of a set of services and network applications, from blogs to photos, bookmarks and social networks, all interchangeable with other users. In particular, it allows the user total control over the content. The operational space assigned to each student can be customized as desired, for example it can be enriched with photos, videos, and texts, which are connected to the personal information in the profile. The resources available in these new platforms include chat services, forums, blogs, all with the intent of aggregation and collaboration. Thanks to the "tagging" system a user can identify those who share his own interests.

Thus, with these new platforms, a user who utilizes the typical Web 2.0 services has the possibility of catalyzing all of these applications and information within a single interface.

Web 1.0 and Web 2.0 enable the implementation of two different learning paradigms via the Web. With the new Web more open environments have been designed, and are managed directly by the users. They do not have the limitations of closed platforms but allow the user autonomy, symmetric relationships, and can be easily connected to external services. This allows the learning community established around them to not be only formed by students and teachers of a course, as in theory it can be composed also by people from outside who harbor similar interests.

In this way, the students also reduce the gap between university and private life, and are encouraged to explore and discuss interests born in class also outside the school context, with external people. These possibilities are not allowed by the old platforms, centered on institutions and characterized by access control and asymmetric roles (Thompson 2007).

A guiding principle in the use of Web 2.0 is to consider the Web as a kind of desktop (Franklin and Van Harmelen 2007).

Today numerous applications with the purpose of transferring to the Web the personal productivity space that we usually have on the desktop of our personal computers are becoming more common. These applications have the characteristic of being "cross platform", they can be used on PCs, PDAs, smartphones, and mobile devices in general (Fallahkhair et al. 2007; Abowd 1999; Abowd et al. 1998; Rick and Rogers 2008; Cochrane 2005; Kukulska-Hulme 2009). This allows users to work on their files anywhere because the data is stored on the Web. The Web becomes our desktop. Thus, for example, our videos are on our personal YouTube channel, our photos are on our Flickr profile, our textual documents are published on our blog, and so on. Moreover, with the aim of storing personal products, remote storage tools are used, the so-called remote hard drives or even the spaces available to store documents online.

Web 2.0 platforms function as binders of useful educational services: each one combines its potential with that of others, allowing the creation of customized learning spaces. In fact, students using a PLE become managers of their own learning course (student centered learning) controlling both the mode and timing of studying. Such a learning environment also creates "social presence" because it involves participation in a virtual community, and a real knowledge communication experience is enforced. It allows for a greater knowledge specialization and facilitates the search for arguments (and people who have the same interests).

These tools allow the persistence of ideas over time: for example, when a post in a personal blog (one of the tools of PLEs) is created, it is always visible and traceable for private and public use; it does not disappear at the end of the course, but remains visible. Through social bookmarking tools it can be shared, cataloged by tagging and reported on other Websites or blogs. PLEs can create a strong bond between the formal and informal learning (i. e. the one implemented in all the moments of our lives) that contribute to the creation of our identity.

Taking into account this potential, it may be important to include in these learning environments also an e-portfolio, which is a tool that allows for the collection of

all information regarding a student, a kind of digital curriculum to which it is possible to add information continuously to show the know-how gradually acquired. The use of an e-portfolio allows to monitor the learning process of an individual and the new skills acquired. It recognizes lifelong learning and encourages its dissemination and practice: in education, the concept of "2.0" also means being aware of the fact that a critical consciousness is generated by every activity accomplished, it means being able to go beyond formal learning to consider all fields of learning.

According to McLoughlin and Lee (2007, p. 672) "it is the combination of the technological affordances of social software, with new educational agendas and priorities, that offers the potential for radical and transformational shifts in teaching and learning practices, what we have referred … as *Pedagogy 2.0*".

Personal Learning Environments, since they are person-centered environments, take into account both formal and informal elements. Therefore, the e-portfolio has an exhibition function, as it represents and shows what a person has learned over time. Its aim is essentially to capture the performance of the individual, his choices, motivation, and progress, in order to allow an evaluation of his competencies. It must allow the user to operate a computer with the greatest freedom, as in everyday life, allowing him to develop a personal learning environment, suited to his learning style. In fact, each person has his own approach when dealing with a problem, so its solution varies from an individual to another.

Therefore, if the old interactive learning environments had a highly structured implant, were time-limited, and their objectives were predetermined by the program of study leading the user to a passive attitude, in the latest generation environments the framework should be defined directly by the students, the goals should include personal use (even informal) and users should be encouraged to be actively involved.

5.2 MOOCs and Entrepreneurial Universities

Changing nature of higher education, in which complexity from integrating digital media is becoming inherently less predictable, should keep in mind that challenges remain in optimizing technological alternative media along more than one front simultaneously, rather than sequentially in the way they are used to doing. Where traditional learning management systems (LMS) start to lose their exclusive usefulness as tools for education, the need for an adequate understanding of how to facilitate learning and communication assumes increased importance. The social nature of emergent technology can potentially encourage active support in formulating policies that address the student entrepreneurship. The experimentation is to achieve a synergy not only of resource but also of mentality, which can help to generate more flexible actions. On this basis, the universities are ever seeking new ways to overcoming traditional boundaries that can easily suppress the stimulus to communicating and collaborating for both students and educators. Actually, higher education is beginning to evolve in response to the opportunities these new tools open up to open, peer-to-peer, collaborative online and face-to-face learning, research,

and resource-sharing for a long time not only among educators and students, but with the community at large.

> The reason these social technologies work is because teachers can foster collaborative work not only among their own students, but with colleagues, students, and community members from around the world (Grosseck 2009, p. 482).

The real added value on Web 2.0 is not necessarily the content but the social activity that emanates from content: the interaction and sharing between users.

> The use of Web 2.0 technologies has significant potential to support and enhance in-class teaching and learning in higher education … However, an effective learning environment fosters collaboration among students and faculty; allows the student to create and share new knowledge; as well as support the connection of different pieces of information (Ajjan and Hartshorne 2008, p. 79).

Canadian educator George Siemens developed a theory called "connectivism", inspired by the fact that networks contain knowledge to be exploited. The theory in object allowed to give account of changes in education ensuing from the widespread use of technology inside and outside classrooms. Together with Stephen Downes, Siemens proposed a new type of online course open to anyone that was entitled Connectivism and Connective Learning/2008 (CCK/08). In this class, the typical features of connectivism were applied; a great number of students could collaborate interactively, generate new content, and initiate arguments and discussions. To do so they could avail themselves of several platforms such as forums, blogs and social networks. The goal was to enable students to build their personal learning environments (PLEs) on their own, while exchanging knowledge interactively.

At the same time, another inspired person, Salman Khan, appeared on the scene. Despite not being a formally trained educator, he would become one of the best-known teachers in the world. Initially, he started creating short math tutoring videos, using his home computer; the first recipients were his younger cousins, and later anybody who had access to YouTube. In North America, Khan has attracted much attention, since he now tutors millions of students worldwide, thanks to the academy that bears his name, the Khan Academy, which is a non-profit educational website featuring a number of video lectures on different subjects. Its mission is to provide "a free world-class education for anyone anywhere".

Another MOOC precursor is iTunes U, which was started up in 2007, and allows to download educational materials. A number of universities joined the initiative by organizing specific courses in line with the format or simply posting video lectures, podcasts or e-books that could be downloaded worldwide at no charge.

MOOCs offered today have been widely influenced by the above mentioned initiatives. In fact, many MOOCs have the same features as the Connectivism and Connective Learning/2008 class, Khan's videos, and iTunes U's offer. On this basis, a great number of teachers in all the world started to become accustomed with the idea of creating online classes that could be accessed without paying a fee. These are now often described as "traditional" online classes, which have been offered for a long time by universities and colleges to complement their educational offer. Nowadays, it is also possible to achieve a complete online degree: although programs are at a cost, this proves that online learning is possible.

Table 5.1 Definition of social entrepreneurship

Title	Author	Definition
1. Hoogendoorn B., Pennings E., Thurik R., What Do We Know About Social Entrepreneurship: An Analysis of Empirical Research, 2010.	Nicholls (2006)	"The term "social entrepreneur" was first introduced in 1972 by Banks, who noted that social problems could also be deployed by managerial practices. Social entrepreneurship represents an umbrella term for a considerable range of innovative and dynamic international praxis and discourse in the social and environmental sector"
	Boschee and McClurg (2003)	"Smart nonprofit managers and board members realize they must increasingly depend on themselves to insure their survival . . . and that has led them naturally to the world of entrepreneurship."
	Kerlin (2006)	"The European social enterprises address services such as housing for increasingly marginalized groups, childcare, urban regeneration, and employment programs for the long-term unemployed."
2. Hoogendoorn B., Van der Zwan P., Thurik R., Social Entrepreneurship and Performance: The Role of Perceived Barriers and Risk, 2011.	Zahra et al. (2009)	"Social entrepreneurship encompasses the activities and processes undertaken to discover, define, and exploit opportunities to enhance social wealth by creating new ventures."
	Moizer and Tracey (2010)	"The sustainability of social enterprises in considered as a balance between resource utilization (to build and maintain competitive advantage) and engagement with local stake-holders (to build and maintain organizational legitimacy)."
3. Auerswald P., Creating Social value, Stanford Social Innovation Review, 2009.	James A. Phills Jr., Kriss Deiglmeier, and Dale T. (2008)	"A novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals."
	Barro (2007)	"Social entrepreneurs are much more likely to be the entirely reasonable people, often working for large companies, who see ways to create better products or reach new markets, and have the resources to do so. By this definition, every entrepreneur tries to be a social entrepreneur and every market transaction creates social value, the bigger the better."

Technically, MOOCs rely on most of the technology behind the initiatives described above. MOOCs started to become widespread in 2012. They were created by colleges and universities, individual educators, charities and social entrepreneurs to combine the best technical tools with the most excellent teaching. This was how the most successful initiatives, such as Coursera, Udacity and edX were established, attracting the interest of millions of students all over the world (Table 5.1).

> An online phenomenon gathering momentum over the past two years or so, a MOOC integrates the connectivity of social networking, the facilitation of an acknowledged expert in a field of study, and a collection of freely accessible online resources. Perhaps most importantly, however, a MOOC builds on the active engagement of several hundred to several thousand "students" who self-organize their participation according to learning goals, prior knowledge and skills, and common interests. Although it may share in some of the conventions of an ordinary course, such as a predefined timeline and weekly topics for consideration, a MOOC generally carries no fees, no prerequisites other than Internet access and interest, no predefined expectations for participation, and no formal accreditation (McAuley et al. 2010, p. 4).

MOOCS … and the Intellectual Traditions?

At the end of 2012, the Venture Lab platform at Stanford University, addressed to the most entrepreneurial minds, organized six MOOCs (Massive Open Online Courses) taught by professors from the same university; they were freely accessible from all over the world using a personal computer and a fast Internet connection. After less than a year, the number of courses had increased to nine. EdX, the platform created in autumn 2012 by the two highly prestigious universities MIT and Harvard now has 12 university partners, including two in Europe. Its purpose is not only to offer interactive online courses, but also to utilize the platform for research on the mechanisms of learning and on how these are influenced by the use of technological devices. Coursera, in which a high number of American academics was already involved, has included new organizations such as colleges and museums. Also an Italian university appears, as later will be reported.

In contrast with earlier online education platforms, Coursera and edX are interactive platforms, and thereby have the potential to create global communities of learning. They can fully exploit Web 2.0 revenue sources such as crowdsourcing and crowdfunding. These platforms include a social element, with tools such as peer grading to reduce costs.

Therefore, within a few months, a certain transformation and structuring of the field of MOOC-based training is already clear. As stated by Tullio De Mauro on "L'Internazionale" dated March 2013, this may be due to the fact that "three great forces feed the cyclone: dissatisfaction of traditional lectures, hope that the network will lead to more efficient interactive learning of the silent listening/individual reading/testing and exams triplet, and the need for internationalism." And in fact, as in other fields, also in that of education we are witnessing an intense experimentation both by universities and private individuals, offering platforms for the market to involve academic institutions or individual teachers in order to seek a business in providing related services and certifications.

The matter still eludes many, but certainly not Germany that closed April 30, 2013 a 250.000€ contract for ten MOOC courses, to be implemented soon

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on the brand new private platform Iversity. The stated intent is to involve Southern Europe to open up the competition with the American Coursera.

Also the European Union has begun to believe in it: Androulla Vassiliou, European Commissioner for Education, Culture, Multilingualism and Youth, launched April 25, 2013 Openuped, a new MOOC project directed by EADTU, the European Association of Distance Teaching Universities, with 11 partner countries including Italy. Germany is not present, as it now seems to be running on its own, but other countries answered the call, such as France, the UK, Turkey, the Netherlands, Portugal, Slovakia, Lithuania, Spain, Russia and Israel. The areas covered by the courses range from mathematics to economics, including digital skills, e-commerce, climate change, cultural heritage, social corporate responsibility, the modern Middle East, language learning and creative writing. The formula that provides for the recognition and certification of the credits that can be used to obtain a diploma is quite interesting. However, a fee is required: the cost varies between 25 and 400€ depending on the course load and the institution.

At this point, it is necessary to examine the state of the Italian MOOCs. Italy has taken them into account, just that the world of Italian e-learning is wonderfully nuanced. Some examples are the student-run Oilproject whose manifesto states: "Our school is everyone's"; the complex web platform "Federica" set up by the University of Naples "Federico II", with 5,000 open access classes and various services included, but weaker in terms of learning content quality; the truly international styled experience of the University of Rome "La Sapienza", that decided, first among the Italian universities, to enter Coursera with three courses, one scientific and two humanistic, which started in autumn 2013. Interest is focused on the large user base already attracted by the American platform, particularly from the BRICS - Brazil, Russia, India and China—hotbeds of innovation and entrepreneurship. Further developments are expected.

"La Sapienza" is the first Italian university to enter Coursera, the academic spin-off born in April 2012 on the initiative of two professors at Stanford University, Daphne Koller and Andrew Ng, with the aim of creating a web space where anyone can participate in free online courses on various subjects. Coursera maintains one of the first MOOC platforms, which is attracting so much interest around the world as a means for innovative large scale distance learning. Coursera has the support of no less than 62 universities: these include, for instance, Princeton, Pennsylvania, Michigan, Stanford, the Ecole Polytechnique, the Technische Universität München, Hong Kong, and Tokyo. Registered users in Coursera have the opportunity not only to follow the courses, but also to test themselves with exercises and participate in a forum to discuss with teachers and other students. The initiative is proving very successful with its nearly three million members from all over the world, especially from the BRICS. "La Sapienza", the only Italian university to participate

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in the project, will draw on its many excellences to offer courses in various disciplines. In this first phase, three courses will be provided, two in English in the humanities area, and one in Italian about physics.

The next idea that will change the world this time may not be born in a garage in the Silicon Valley. The new Steve Jobs or Larry Page may be one of the Pakistanis who meet up to study together in an Ikea cafeteria in the suburbs of London, "because there is space and the web connection is very fast"; or one of the girls in Manila who have created a Filipino study group on Facebook where they exchange ideas and notes. Or it may be 26-years-old Yusuf, a veterinarian from Nigeria who cannot wait to create his own company and is sure to have in mind a start-up that will be a great hit.

Geography considers them far away from each other, but they are all classmates. They all attend a university course entitled "Development of innovative ideas for new businesses," taught by Professor James V. Green, Professor of Economics at the University of Maryland. Green's class is multiethnic and certainly crowded: there are Yusuf, the Pakistanis in London, the Filipino girls, and with them there are other 85,000 students from all over the world.

Not one of the 193 UN member states seems to be missing in the class in which the American Professor teaches how to start up a successful business. This is the new frontier of global education. As stated by Thomas Friedman, it is the 'revolution' of the MOOC, the term that defines academic realities allowing free online distribution of quality education to anyone.

The phenomenon is taking off at an impressive rate. Coursera.org, the university platform that also hosts Professor Green's academic lectures, was born only 8 months ago and already has 2.5 million members, to whom it offers courses in 33 prestigious universities such as Stanford, Columbia, Duke, Brown, MIT or Princeton. Other similar realities such as Udacity or EdX (a consortium headed by Harvard) are developing similar initiatives. The idea is to distribute free of charge to anyone who can speak English university courses so far reserved to those who can afford 40,000$ fees per year.

The courses include deadlines and tests to be fulfilled: at the end a certificate is issued to which American universities will soon assign a value in terms of credits. It is possible to attend free classes which can be chosen without limits. The hope on campus is to stimulate the "appetite" of knowledge with an academic aperitif, in order to gather new members.

Accessing one of these online universities is as simple as joining Facebook. The Italian newspaper "La Stampa" tested Coursera. The first step is to create a profile, similar to the one many people already have on the Web: age, nationality, a photo, a brief description and links to personal pages on Twitter, Facebook, G+ and especially LinkedIn, the social media to share work and study experience.

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In 5 min it is possible to become a "freshman" in a campus from Wonderland, where there is plenty of choice for those who want to study. At present, Coursera offers 221 free courses of all kinds. If the aim is to understand the algorithms under the guidance of two professors at Princeton, it is possible to verify when the course starts and how long it lasts. If one is interested in an in-depth analysis of financial engineering and risk management, three professors at Columbia University are available for 10 weeks. And again, introduction to mathematical thinking, principles of macroeconomics, the study of "big data" are only some examples of courses that can be chosen.

Also those interested in humanities can find food for their minds. One can just imagine what it means for a person in a developing country to study the ancient Greeks with a professor at Wesleyan University, as if he were with him on the campus in Connecticut.

Once the course has been selected, classes start. The 85,000 students of Professor Green are required to follow from five to six video lessons every week, which can be accessed at any time of the day or night, regardless of time zones; they have to download the teacher's slides, respond to mini-quizzes during the lessons and to weekly verification tests typical of the American system: multiple answers, "true or false" and short papers. Lesson after lesson, Green addresses his global audience to discover the entrepreneurial mindset and the process of choice, he teaches how to prepare a business plan and a basic marketing strategy.

Speaking from his office in Maryland, he provides young Africans or Asians with examples taken from the real world, explaining the functioning of the Amazon sales network or how Ferrari manages to create expectations and desires related to its automobiles. Finally, he gives valuable information on how to raise capital for a start-up and draw growth strategies.

Of course, the human touch of a traditional university environment is lacking. The alternative here are discussion forums, which arise spontaneously based on their geographic or linguistic origin, and study groups in every language, including Italian. However, there are only a few Chinese, and this reflects the difficulties of a free exploitation of the Web in China. And for those who are still willing to meet others and study together it is possible to resort to Meetups, groups of people who share common interests, and meet up in a Starbucks coffee shop, a library, or even Ikea.

The students' spirit of participation is no different from a traditional campus. There are those who complain about their marks, those who criticize the teaching style, and those who have problems with videos that are difficult to download. But most agree with Yusuf, the Nigerian veterinarian, who believes that although many people may think the opposite, the truth is that there has never been a time like this in the world to make dreams come true.

NovoEd: The Social Online Learning Environment

NovoEd, which was developed at first as an in-house Stanford program called Venture Lab, was started up in January 2013 by Amin Saberi and Farnaz Ronaghi, who are both from Iran.

The Menlo Park-based online course program that aims at supporting social learning debuted 15 August, 2013, and since then has drawn up a number of contracts with different universities in order to provide web based entrepreneurship courses. Classes hosted on NovoEd's platform are offered by well-known institutions, such as Stanford University, Babson College, and the University of California, San Francisco. Also the Kauffman Fellows Academy, the online training arm of the Kauffman Fellows Program, named after Ewing Marion Kauffman, offers online courses in order to carry out its leadership development program for venture capitalists.

A number of courses, which is specifically labeled as "powered by NovoEd", are offered to participants. They include "Technology Entrepreneurship" taught in English, Mandarin, and Spanish by Stanford's Chuck Eesley, "VC 101" by the Kauffman Fellows Academy, and "Financial Analysis of Entrepreneurial Ideas" by Babson College. The number of courses will increase in time, but it is not possible to know the profit NovoEd will gain from the partnerships.

NovoEd offers a mixture of free and fee-based programs. Nevertheless, most of the courses are free and open to anyone. This is consistent with NovoEd's past experience with MOOCs (Massive Open Online Courses). Certificates may be released at the end of courses for a small fee.

NovoEd co-founder and Stanford Professor Amin Saberi has always been very excited about the program since the level of members is outstanding. The goal is now to increase the number of classes.

Unlike the three rival MOOCs, Coursera, Udacity and EdX, NovoEd's purpose it to fuel collaboration among students. According to Amin Saberi, the number of people in a class is not so relevant, but the best size is between four and ten participants. Moreover, the number of students who complete an online course is relatively high; completion rate is 17 %, while almost half of those who fulfill the first assignment also complete the class.

Since its debut, 458,600 students in 152 countries have participated in NovoEd classes. Project teams have been created and about 1,500 businesses have been started up thanks to the initiative.

Furthermore, the data generated by students' activities has helped NovoEd create homogeneous groups of teammates and has improved the assessments of their work, since they provide the most accurate evaluation and feedback, which are in line with what the professor or his top assistants would probably give.

As stated by Saberi, empowerment is the focus of NovoEd. In fact, it offers people who live in areas far from the Silicon Valley a real opportunity to start their own business and change their lives.

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Chapter 6
Designing an Entrepreneurial Profile in Higher Educational Systems

Maria Rosaria Della Peruta

6.1 Creating an Entrepreneurial Environment

The emerging reality of MOOCs confirms that it is at least reductive, or even unlikely, to believe in the possibility of encoding within relatively simple models or patterns a complex phenomenon such as that characterizing the advanced offer of an integrated system of services supporting university education (Roberts 1991; Clarke 1998; Cohen et al. 1998). There is a widespread awareness of the fact that the role of universities has undergone profound changes in recent decades: from institutions dispensing "knowledge" and "research" they switched to organizations also involved in the "economic and social" development of various countries, to the point of acting as regular development agencies, in some cases (Agrawal and Henderson 2002; Branscomb et al. 1999; Geiger 1993; Siegel et al. 2003a, b, 2004; Siegel and Phan 2005; Agarwal et al. 2004; Nerkar and Shane 2003; Zahra et al. 2007; Bok 2003; Carayannis et al. 1998).

The change is perceived by the fact that the various actors involved in the evolutionary process (universities, enterprises, research institutions, public administrations) tend to be structured in order to facilitate, through relevant actions, the development of a joint promotion and support activity that focuses primarily on the "people", and then on the "business" itself.

In many quarters, it appears that the co-development of specific institutions and diverse technological instruments "has the potential to spread a disruptive entrepreneurial philosophy": through a more streamlined bureaucracy, ensuing from the fact that it is more accustomed to interface with a community, a social and cultural "mentality" that legitimates and encourages the pursuit of *market opportunities* is finally promoted (Zucker et al. 1998; Utterback 1994; Etzkowitz 1998, 2002).

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The latter is basically responsible for the ability to perceive, and possibly pursue, the various *economic opportunities*, which are more or less latent, resulting in a differential in the "entrepreneurial activism" compared to other social contexts less endowed with regard to *corporate and entrepreneurial culture* (Saxenian 1994; Segal 1986; Shane 2001; Shane and Stuart 2002).

If MOOCs become a more common way of learning, then MOOC students who have understood the learning process to be dynamic and collaborative will bring this mindset to their own projects (Daniel 2012; de Waard et al. 2011; Rodriguez 2012; Liyanagunawardena et al. 2013).

Learning communities (and sub-communities) emerge naturally from the MOOC process. These endeavors are likely to be more inclusive and socially-oriented, with the goal being advancement in the name of the common good (Truyen et al. 2013; Long 2013).

MOOCs mechanisms translate into new ways of valuing learning to understand the need to focus more on creating a *business climate* in order to bring out the predisposition towards undertaking and maintaining an entrepreneurial behavior (McCredie 2003).

In fact, most of the individual attributions, responsible for patterns of behavior, appear to descend from and be markedly influenced by the factors affecting the promotion and dissemination of entrepreneurship, namely the conditions under which the new organization was created and developed.

The empirical confirmation to which this work is aimed starts from understanding this link, meaning the awareness that the personal choice to engage in entrepreneurial activities is the result of a complex process that has its roots as much in the "person" as in the surrounding '"environment", so it represents a composite of social, political and educational aspects. The verification of such a conception becomes, of course, preliminary to the implementation of the most appropriate policy measures.

6.2 Making Sense of the Student Entrepreneurship Dynamics

To what extent more strictly psychological stimuli may arise, which in many cases just depend on the "pressure" exerted either by the lack of suitable employment alternatives or by the search for higher professional rewards, in order to encourage young people (students or graduates) to adopt an entrepreneurial mindset?

Thus, it is not surprising if there is some confusion, a widespread sense of frustration, or even signs of a crisis of "consciousness", caused by the feeling that the efforts of universities have not been able to go very far, or fast enough, to face the changes over time in the meaning of entrepreneurship; or even by retrieving many pieces of the *puzzle*, there is still no clear picture emerging of who the student entrepreneur really is, and what is the typical function that universities can perform in relation to the promotion of entrepreneurship (Raffo et al. 2000; Lans et al. 2008; Cuevas 1994; Izzrech et al. 2013).

It is an interpretation that stems from the fact that the activities of *self-employment* reflect only a small part of the aspects of authentic entrepreneurship—*opportunity entrepreneurship*—presenting, rather, a "defensive" character related to the lack of professional alternatives within the reference contexts—*necessity entrepreneurship*.

This misunderstanding could generate many repercussions on the economic policy measures for the promotion and dissemination of entrepreneurship adopted by universities.

The prevailing and most convincing interpretation considers that policy guidelines supporting entrepreneurship should refer to the potential of universities in fostering the emergence of new economic opportunities and the consequent introduction of new ideas in the market, allowing the accumulation of all the knowledge necessary to the conception of the business idea and the formulation of expectations about the future of business (Schulte 2004; Scott et al. 1998; Powers and McDougall 2005; Garavan and O'Cinneide 1994).

In this regard, the most significant efforts are expected to occur in order to demonstrate to the potential student entrepreneur how the individual *cognitive* perception of reality can be translated into action.

For this purpose, general inclination and orientation, and personal motivations and solicitations, should be taken into account. In this context, there is some convergence on the fact that individual attitudes can be positively influenced by exogenous factors, such as training, with educational and training programs, where the start of a business activity is also a social activity that is the result of a cognitive mediation by the student entrepreneur with the environment in which he was brought up.

However, according to some authors, the influence of the "university" environment and the economic solicitations of the context (economic trends, availability of infrastructure and support services or tax break measures, etc.) comes into play mostly as a catalyst for the preexisting intention of initiating entrepreneurial behavior (Galloway and Brown 2002; Rasmussen et al. 2006; Krueger et al. 2000; Hills 1988; Laukkanen 2000; Thorpe et al. 2006; Martin et al. 2013; Leitch and Harrison 1999; Béchard and Grégoire 2005; Oosterbeek et al. 2010; Lüthje and Franke 2003; Raposo et al. 2008).

Namely, they can accommodate (counteract) a latent vocation and/or reinforce (discourage) motivational stimuli, not create them from scratch, helping to modify or remove existing resistances or constraints, finding new solutions to well-defined problems and answers to novel questions, such as those relating to the ways to enhance their skills.

In other words, the set of exogenous inputs incurred by the potential entrepreneur, which are also interpreted on the basis of the subjective spirit and vocation, act by changing his own *culture*, that is, the ways and forms in which, at least initially, he refers to economic initiatives; while, thereafter, behavior arising from the process of learning in a variety of non-linear, connective ways, may prevail (Del Giudice et al. 2013; Della Peruta and Del Giudice 2013; Campanella et al. 2013).

In theory, awareness emerges, however, that the less conducive the exogenous environment is, the more necessary the presence of talented people appears to be. Still, the lower the availability of resources able to encourage and support the spread

of entrepreneurship in contexts that are relatively backward and scarcely used to stand-alone initiatives, the greater the importance of preventive *screening* of aspiring student entrepreneurs.

Thus, any desire, aspiration or entrepreneurial mindset may not be transformed into the intention to engage in a business, because the intention emerges from the perception of feasibility. Perception is usually acquired through direct experience or practice, indirect or observed by relating to other reference models, as well as the experience gained from the interaction (or persuasion) with other people/communities oriented towards entrepreneurship, a fact that may be lacking in the absence of the so much invoked virtuous circle, including open learning, the business system and the externalities necessary to the birth of new entrepreneurial initiatives (Philpott et al. 2011; Etzkowitz et al. 2008; Guerrero and Urbano 2012; Keast 1995).

If the social entrepreneurial process is the result of an exclusive, discontinuous and non-linear process, made of random and weighted choices, which are only marginally predictable, then how should universities re-evaluate the concept of entrepreneurial spirit, like the other "talents" in the social, liberal arts or sports fields, which can and must be trained and cared for in the various aspects that make it up and in different periods of life?

It is possible, on the one hand, to agree with many authors who believe that entrepreneurship can be taught and consequently learned; some aspects can be learned "in the classroom," others through practice, provided that students, consistently with their own character and temperament, are willing to expend energy and passion.

The transfer of entrepreneurial culture, mainly at an informal level, may encourage people to value its features and consider in a positive light the challenges and incentives it can offer; it also enables to better understand and assess both tangible and intangible benefits associated with that lifestyle, allowing to perceive in a positive way even aspects such as uncertainty, dynamism, and responsibility.

On the other hand, the fact that entrepreneurship is a process and not a state makes it far from easy to transfer in a prearranged manner those spiritual components to individuals under the programs aimed at supporting the promotion and spread of entrepreneurship (Fayolle 2000; Duberley et al. 2007; Etzkowitz and Zhou 2008; Mautner 2005; Turker and Selcuk 2009).

Even more difficult, probably, is the task of impacting the character and psychological qualities that are believed to underlie the conduct of business, and this reconfirms the opportunity that the skills and expertises of an established or would-be entrepreneur involve several operational fields.

Thus, the possession of multiple expertises is an aspect that affects both the probability of success of the initiative undertaken, and the adoption itself of the entrepreneurial behavior. It follows that the subjective attributions, in parallel with the change of roles and tasks (not the function) that are to be performed, should undergo some changes as the chances of survival of the business idea increase. However, too often student entrepreneurs are not able to operate this transition.

For the development of entrepreneurship, covering all of the roles and duties that from time to time they deem appropriate to carry out, and also to predict the very outcomes of actions taken, the consequences of which must be the most desirable,

students must have/acquire the personal traits that in various circumstances become or represent true expertises. For an ideal or real entrepreneur, to believe that he owns an adequate "background" in terms of knowledge and character is a preliminary step to implement the project based on the patterns of thought, interpretation and behavior acquired automatically or with previous experience, training, education and/or other forms of cultural influence (Del Giudice 2008; Del Giudice et al. 2011; Del Giudice and Straub 2011).

The activation of the processes of creation of "practical knowledge", in which the relationships between "master and apprentice" are established and maintained, shall ensure, in particular, the reproduction of knowledge, namely learning acquired through specialized seminars, advanced training courses in business administration, business games, presentation of success stories, but above all evidence of student entrepreneurs, where any new knowledge is carefully systematized so it can be better implemented (Shannon 1995; Collins et al. 1991; Yeatman 1995; Bieber and Worley 2006).

The solution, suggested by several parties, points to the existence of different types of targeted training, as well as the possible start-up phase of the initiative, the field of operation, contextual barriers or other environmental uncertainty.

In fact, the amount of real and financial resources to be reserved for this purpose should have the objective of supporting students to enhance their entrepreneurial spirit from a young age, already in the early years of the undergraduate courses, to be then intensified in the specialization and master programs. These reflections make the issue of selecting the most suitable mode of "adaptation" and enrichment of individual "talents" extremely important.

6.3 Entrepreneurial Universities and Effective Policies for Student Entrepreneurship Promotion

Since there is neither a stereotype of successful businessman nor there are methods able to admit to benefits only the very best business ideas, in the absence of a vocation or spirit, would-be entrepreneurs, even if motivated, may not be able to overcome all the obstacles they will have to face, which can be both objective (from cumbersome bureaucracy to inadequate regulations) and subjective (from fear towards such a lifestyle to underestimation of difficulties).

If not all individuals have the vocation and/or the entrepreneurial spirit to read and interpret their own ideas/inventions in an economically viable perspective, all the more far fewer people will be able to understand the needs of customers potentially interested in the business idea, or arrange a package offer capable of satisfying them (Lüthje and Franke 2003; Mintrom 1997; Bramwell and Wolfe 2008; Kirby 2006; Pittaway and Cope 2007; Gürol and Atsan 2006; Etzkowitz 2004).

In order to take the path that leads to the choice of starting a business, which is a clearly alternative choice to that aimed at exploiting technology in other ways, such as, for example, selling the patent or trying to provide business consulting, it is

necessary that *scouting* is not limited to seek and find interesting ideas, but analyzes and examines them in depth, so far as to allow to understand whether those ideas can lead to an attractive and sustainable business model.

For this reason, it is essential to first identify the core business of the future company, the market conditions in which it will operate, the different stakeholders (potential customers, suppliers, etc.), and especially the presence of competitors, motivation and the entrepreneurship character of the proponents.

The scope of scouting requires not to be limited exclusively to the most tangible elements; it is important to indicate where the investment is made and detect what the other actors are doing, but also to value the investment in knowledge and skills acquired to govern the future enterprise. In our case, the definition of business cannot be limited to what is produced or sold; it consists in making the entrepreneurial quality of certain ideas re-emerge, through the folds of an effective screening activity, and selectively targeting the resources in their favor.

In particular, scouting and screening represent two sides of the same coin. While, on the one hand, there is a need to enhance raising awareness and incentives to generate new ideas, on the other hand, knowing how to target and select the most promising entrepreneurial formulas becomes a priority for the development of the initiative.

In this case, a considerable investment of energy and resources in the stages of awareness, assessment and screening may limit direct action to activate effective forms of scouting.

According to others, these organizational choices are not mutually exclusive. For some organizations the last few years have been marked by the use of joint applications, for which, in order to obtain unlimited potential, an intrinsic consistency has been highlighted.

In some cases, the basic mode from which the applications of "*direct scouting*" models originated was preceded and accompanied by a deliberate process within departments that relies, on the one hand, on the possibility of exploring business ideas directly within the research groups themselves, and on the other hand, on the synergy that is released from centralized coordination for other activities that support the creation of enterprises.

From these considerations the latitude of the changes carried out by entrepreneurial universities is clear; and these, in some of the cases examined, change the rules of the game, namely allocation processes, methods of organization, but above all functional activities and results.

The mission of entrepreneurial universities is to become drivers of innovation and technological progress.

The position of entrepreneurial universities in support of student entrepreneurship varies depending on the supply of services, differentiated according to the stage of development of the business idea, the composition of the group of student entrepreneurs, the type of know-how or the technological sector.

It should also be noted that the process of support, that is the sequence of activities to be undertaken to facilitate the transformation path from business idea to business market, does not always take on the same configuration, requiring flexibility in individual activities due to the peculiarities of each individual entrepreneurial path,

and context conditions (poorly integrated tools and initiatives, capital market to be activated).

The multiplicity of initiatives undertaken by entrepreneurial universities has gradually acquired a more systematic character and intensity, but also new forms of entrepreneurship are periodically proposed for the purpose of their experimentation.

This way of doing business, also characterized by interest towards the human and social dimension of innovation, along with the critical issues that arise in the application and adaptation of new technologies, has made universities a breeding ground for new entrepreneurs.

In particular, the experience of representing a function that is effective in determining the decision to undertake a business is relatively young, and the results will be evaluated in the medium to long term. It is however clear that the action supporting the creation of enterprises over the last years has caused a significant boost to innovative entrepreneurship, and contributed to the promotion and visibility in the market, the media and the territory, thanks to the many national and international events they organize, and in which they participate.

While, on the one hand, start-ups contribute to the consolidation of universities as "open systems", mainly due to the contribution they provide in terms of implementation of a system of relationships, contribution of new knowledge and innovation culture (*intangible assets*), on the other hand, they are characterized by a set of management complexities and criticalities that universities are continually faced with.

The "intervention policies" are synthesized primarily in activities of assistance and mentoring to future businesses.

These activities aim at creating upstream the conditions to make the insights of student entrepreneurs operationally feasible, to set up the pathway that gradually leads from the initial stimuli to a design and development capable of managing the growth of a start-up.

The logic of intervention responds to the constant search for solutions to initiate and develop start-ups that, very often, does not find a swift formalization: by most parties there is a need for a supporting "superstructure" that would reinforce some mechanisms and make them naturally acquired and distributed, favoring the consolidation of university coordination competencies. This interpretation helps to understand and set in a perspective the boundaries and limits of the activities of entrepreneurial universities in supporting the processes of student entrepreneurship; the effectiveness of these activities should be evaluated within the organizational capacity, of synergy, critical mass, and innovativeness.

In particular, the elements identified provide insight into the critical issues related to support and mentoring services, and financing.

- Support and mentoring
  Before starting a business venture, a set of tools aimed directly at management is particularly relevant for the purpose of the potential development of a start-up; they must be designed in order to combine the scientific and technological knowledge with business, managerial and legal expertise, essential in the start-up

phase and necessary to acquire management resources to gain a distinct long term advantage on the field.

Support activities have mainly a pragmatic value; they pursue the aim of representing, with the support of a methodological framework, how the business plan is used by different actors, especially entrepreneurs and venture capital investors, that are placed along the chain to create and support the development of innovative enterprises.

The business plan implies, as trend line for future years of management, proposals and projects discussed within the management team, and consists of an interaction between the levels of the center and the future enterprise, which is expressed by a sort of "dialogue in time" until an agreement on the contents of the plan is reached.

The plan is nothing more than the formalization of all this, and its main purpose is to "force" the entrepreneur to look into the issues and managerial implications of the future enterprise; from the advantages of work planning, linked to timing of the commercial (marketing/sales) and financial aspects (through constant monitoring of the needs and the proposal of alternative sources), to the benefits associated with increased frequency of verification of the results achieved, adoption and implementation of balanced score card techniques (in programming/monitoring of strategic objectives).

During the incubation period, in order to allow managerial mentoring and support of the firm, entrepreneurs must be able to take advantage of tax, legislative, administrative, patent, commercial, corporate security, and technical advice, and rely on the backing and experience of senior managers.

On the other hand, the ability to implement and/or modify continuously business plans requires that in start-ups managers develop additional professional skills, which are essential to turn the plans into reality.

- Financing

Heavy emphasis is being placed on the importance attached to financial sources (adjustment of resources and the relationship between equity and debt) to implement the business plan.

Among the measures to support the creation of enterprises run by students, there should be support to direct access to preferential relationships with banks in order to obtain credit on favorable terms, Seed Capital funds, and connections with private investors (*Business Angels*).

In the conception phase of technological innovation, characterized by basic research, the substantial contribution of resources generally consists of funding to Universities and Research Centers, and Public Tenders. The result of this phase of research is typically a core technology defined at an academic level.

Students/potential entrepreneurs who perceive in core technology the possibility of commercial use/applications, with a significant potential for economic development, are faced with the need to finance the start-up phase of their own business, that leads to a first objective consisting in the construction of a prototype of the product and the verification of economic feasibility of the project.

The difficulties in raising financial resources are born at a time when public funding, available up to the previous phase, is no longer adequate to the objectives of the investment. Therefore, there is a need to be eligible for private capital typically provided at this stage of development by the entrepreneur himself, his team of reference, or the first private investors, the Business Angels.

The first institutional investors operating in the so-called stages of Seed Capital and Early Stage Venture Capital support the financial needs of the new venture, if satisfactory results in tests on the technological and economic feasibility of the development project have been achieved. This is a phase in which the start-up firm still does not recognize the turnovers, but at the same time it feels the need to commit resources to place its products on the end market.

The level of risk at this stage of development is high, and it is not shared, in most cases, by any credit institution in the provision of debt capital to the new venture; and funding through equity is the only alternative.

The function of Seed and Early Stage Venture Capital investors, at this point, is to identify the most profitable business projects, endorse them in the early stages of development and support them up to a level of growth that allows the intervention in the venture capital by larger institutional investors, specialized in the provision of Growth Capital. Business Angels, that invest in the process of verification of the feasibility of the business project, usually contribute with a few dozen thousand Euro in capital, while Seed and Early Stage Venture Capital institutional investors provide the means for the initial structuring of the firm and the launch of the products on the market (amounts that can even reach millions of Euro).

Both these types of investors are characterized by the need to be "physically" close to the firm object of their participation, so they can "talk" to the entrepreneur and assist him, as necessary, during the critical phases of his business.

For this reason, the hope is that, in favor of the action of this type of investor, universities may indeed intervene synergically and symbiotically; this in order to develop a greater integration between the funded firm and its financiers, through networking services (extensive network of contacts with the world of business or finance, and agreements with institutions, associations and businesses in the area), pre-incubation services (feasibility assessment of the business idea and transfer of corporate culture; availability of space and technical/specialized assistance), and incubation services (space and specialized services, mentoring in the areas of business management).

6.4 Understanding for the Managing Student Entrepreneurship

The state of the experiences on this subject is not sufficient to outline significant syntheses; moreover, it must be noted that the field is still unexplored, and it is clear that the intellectual effort to reach some interesting proposals is remarkable, if it is true that the issue should be examined starting from the cultural roots of the context in which a system of incentives and support is to be established.

First, the empirical verification leads to the conclusion that to encourage start-ups there should be a mobilization of a wide range of resources, both technical and financial, and skills, both professional and managerial, to support management activity whose complexity increases by moving gradually from the first stage to the next, resulting in a corresponding adjustment of intrapreneurship by those in charge (teachers, researchers, research organizations).

In particular, complexity increases for some sort of perspective distortion that may incur those who are designated to identify the needs in terms of services, for the tendency to consider structural weaknesses a projection of their own latent limitations to potential development.

In fact, many comments on the lack of entrepreneurial spirit and initiative by students point to the difficulty of consolidating activities involving the implementation/execution of business ideas by the contexts to which they belong; this stresses that the issues of backing/support to entrepreneurship do not relate only to the structural design, but also to the definition of the processes.

Technical expertise and methodological procedures to be implemented in order to promote student entrepreneurship must be combined with an organizational ability to operate as a coordination service that stimulates the conception of the business idea, provides mentoring, assistance, and support, and facilitates the relationships between the parties (start-ups and universities).

The problem of applying systematically these organizational changes highlights that it is no longer possible to intervene with small extemporaneous "corrections", by activating a new regulation and/or changing a provision, at the risk of encouraging low propensities to actualize (subject to availability). Rather, many deplore the need for coordinated action, in the longer term, that develops an organizational environment, work methods, relationships, information and support systems that respond to the predictable and unpredictable needs of an enterprise on the verge of being born.

It is a tautological argument, repeated and widespread, but it has remained a statement explored with little effort. It is not of much help to explain how these intervention skills are then reflected on innovative processes or integration mechanisms, and it basically faces a strong limitation consisting in the fact that universities capable of playing their role properly are far too few.

In summary, it has emerged very strongly that the presence or creation of an environment full of opportunities and targeted initiatives enable start-ups to quickly build a compact and articulated formula, otherwise not possible with in-house expertise (Dell'Anno et al. 2004). The problems of growing organizations are not only related to the growth of investment and financial means, but they are also related to the growth of the capacity to manage and organize the business that is being developed. They are processes of learning, professional growth, acceptance of different ways to govern and control the organization. Else, we are dealing with companies that fail to "bloom" because they are not capable to conceive, but above all to create, an economic and organizational combination able to express the potential for development (Del Giudice et al. 2012; Nicotra et al. 2012).

The main factors responsible for the creation of an "elective" environment for the genetic processes of student entrepreneurship are:

A favorable *culture* that legitimizes entrepreneurship as a highly respectable activity, and potential source of personal and social financial benefits.
A widespread perception of the existence on site of good *business opportunities.*
An *environment* that predisposes human resources to develop those expertises and skills necessary to pursue opportunities previously recognized and identified.
A system of *incentives* that enhances the motivations of potential entrepreneurs.

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Part III
Gender, Ethnicity and Cultural Background Differences in Student Entrepreneurship

Chapter 7
Academic Training Programme in Entrepreneurship, Reference Models and Family Business Background

Manlio Del Giudice

7.1 Organizing the Paths of Entrepreneurship: Implications for the Universities

The history of entrepreneurial training may be dated back to the distant 1938, when *Shigeru Fijii*, who was the pioneer of such teaching at the University of Kobe in Japan, set up a course for training for entrepreneurship (Alberti et al. 2004). Despite this, most of these innovative entrepreneurial courses were first introduced in the American universities, which have always had a marked propension towards this more practical than pedagogical type of teaching of such subjects. In fact, many American universities in fact have a long tradition of methods of training for entrepreneurship, as confirmed by the creation and development of business schools and by methods documented in entrepreneurial courses, but above all by opening a pathway for studies of entrepreneurship as a legitimate area of academic programs (Franke and Lüthje 2004; Raichaudhuri 2005).

According to *Binks* (2005) training for entrepreneurship refers to "the pedagogic process involved in the promotion of entrepreneurial activities and mentalities open to new experiences and the exploration of the unknown …".

The recognised function of training for entrepreneurship has been praised as being able to create and increase awareness of promoting autonomous work as a professional choice among young people. For this reason, the role of teaching entrepreneurship is mainly that of building an entrepreneurial culture among young people who, in turn, could improve their professional choices for entrepreneurship in general (Deakins et al. 2005) (Fig. 7.1).

In other words, the objectives of entrepreneurial training are focused on changing the state of behaviour and the intentions of students, so as to provide them with an understanding of "doing business" and of becoming entrepreneurs, leading to the

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TITLE	AUTHOR	DEFINITION
1)Marshall R. S., "Conceptualizing the International For Profit Social Entrepreneur", Journal of Business Ethics, 2011.	• Morris et al., 2002. • Mort et al., 2003.	"Entrepreneurs create new organizations through context dependent, social and economic perspectives and processes ." "Entrepreneur is composed of four dimensions: -the virtuousness of their mission to create better social value; -unity of purpose and action in the face of complexity; -an ability to recognize opportunities to create better social value for their clients; and -their propensity for risk-taking, pro-active-ness and innovativeness in decision-making"
2)Elkington J., Hartingan P., "The Power of Unreasonable People", The Economist, 2008.	• Hartingan P., 2008.	"The greatest agents for sustainable change are unlikely to be entrepreneurs, interesting though they are,"
3)Hassan M., Olaniran S., Developing Small Business Entrepreneurs through Assistance Institutions: The Role of Industrial Development Centre, International Journal of Business and Management, 2011.	• Bolton & Thompson, 2000. • Donald & Hodgetts, 2007.	"The word "entrepreneur" was derived from the French word "entre" meaning "between" and "prendre" being the verb "to take". This means the one who takes the risk in the economy between supplier and customer. Going by this definition, an entrepreneur is, therefore, a risk taker. He/she is someone who starts a business, arranges business ideas and takes risks in order to make profit. Furthermore, we can conceive of the term "entrepreneur" to mean "to undertake", for example, starting of new venture. This means that an entrepreneur creates job for economic growth and social development. The conceptions testify to the fact that entrepreneurs are persons who take risks in the production of goods and services. There is a word which predominantly features in these definitions, that is "risk" which means entrepreneurs are reasonable risk takers with exceptional innovations." "Entrepreneurs are individuals who recognize opportunities where others see chaos and confusion. This means that entrepreneurs are elements of change in the midst of economic hardship. They are aggressive catalysts for change within the market place. They are positive minded in every economic environment in which they find themselves with the desired hope of making changes thereby making profit."

Fig. 7.1 Conceptualizing "ENTREPRENEUR"

creation of new businesses and new jobs and opportunities (Fayolle and Gailly 2005; Hannon 2005; Venkatachalam and Waqif 2005). To reach this objective, it is necessary to plan an entrepreneurial training curriculum that is creative, innovative and inventive so as to link academic learning with the real world (Lee 1999; Lee and Chang, Levie 1999; Luthje and Franke 2002; Matlay and Westhead 2005; McIntyre

Conceptualizing "ENTREPRENEURSHIP"

TITLE	AUTHOR	DEFINITION
1)Hassan M., Olaniran S., Developing Small Business Entrepreneurs through Assistance Institutions: The Role of Industrial Development Centre, International Journal of Business and Management, 2011.	• Hisrich, Peters and Shepherd, 2008. • Aruwa, 2006.	"Entrepreneurship is the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic and social risks and receiving the resulting rewards of monetary and personal satisfaction and independence." "Entrepreneurship is the willingness and ability of an individual to seek for investment opportunities where available, to establish and run an enterprise successfully."
2)Elkington J., Hartingan P., "The Power of Unreasonable People", The Economist, 2008.	• Verheul et al., 2001.	"Entrepreneurship is a multidimensional concept, the definition depends largely on the focus of the research undertaken."
3)Persinger E., Civi E., "The Born Global Entrepreneur In Emerging Economies", International Business & Economics Research Journal, 2007.	• Bruno and Tyebjee, 1982. • Gartner, 1985.	"There are twelve environmental factors that stimulate entrepreneurship. The presence of all of these factors is not necessarily required for entrepreneurship to exist, but the presence of many of them encourages greater levels of entrepreneurship and, in turn, economic growth. The twelve factors are: 1. venture capital availability, 2. presence of experienced entrepreneurs, 3. a technically skilled labor force, 4. accessibility of suppliers, 5. accessibility of customers or new markets, 6. governmental influences, 7. proximity of universities, 8. availability of land or facilities, 9. accessibility of transportation, 10. attitude of the area population, 11. availability of supporting services, and 12. living conditions. Developing nations can enact policies that support an increase in entrepreneurship, especially globally oriented entrepreneurship, and the establishment of entrepreneurial firms." "Entrepreneurship is the result of individual traits (need for achievement, locus of control) activating a set of behaviors (locating a business opportunity, accumulating resources, etc.) that are interacting with the environment."

Fig. 7.1 (continued)

and Roche 1999; McKenzie 2004; McMullan and Cahoon 1979; Mill 1848; Mohd Shariff et al. 2000; Nanda and Sorensen 2006; Neill and Mulholland 2003; Ninnes et al. 1999; Nurmi and Paasio 2007; Ooi and Ali 2005). This study has chiefly concentrated on the field of entrepreneurial training, which has enjoyed an exponential growth at an international level (Hill et al. 2003; Raichaudhuri 2005). This is clear from the numerous studies that have been made of the entrepreneurial capacity for creating new jobs and the importance of academic training in shaping potential entrepreneurs coming from the university educational system (Kourilsky 1995;

Kuratko 2005; Venkatachalam and Waqif 2005). For example, *Volery and Mueller* (2006) show the role of university training in influencing the decision of an individual to become an entrepreneur. On this matter, participation in entrepreneurial training has been associated with the growing interest of the student in the entrepreneurial choice and in the possibility of pursuing a valid career in this setting (Gorman et al. 1997). To this end, the universities and other institutes of higher education have an important role in inculcating students with the knowledge and the competences that shall be useful in their future entrepreneurial careers.

Entrepreneurial training has been recognised as one of the determining and vital factors that influence the career decisions of students (Kolvereid and Moen 1997; Peterman and Kennedy 2003). Because of this influence, there is a need to examine the way entrepreneurial training could also influence the propensity of university students towards the creation of new enterprises or the natural progress of the student in the family business or, more generally, the propensity towards entrepreneurship. In fact, despite the recent exponential increase of interest in research in the field of entrepreneurial training, researchers are aware of the fact that little has been specifically studied on the relationship that connects entrepreneurial training and the propensity towards entrepreneurship, in particular for Italian university students compared to those of other nations. The objective of this research is, therefore, to contribute to the current literature, identifying the variables of entrepreneurial training that have the greatest influence on students and their propensity towards entrepreneurship (Wang and Wong 2004; Wong and Lena 2005; Menzies and Tatroff 2006).

The following section, therefore, briefly describes all the attributes of university entrepreneurial training that could influence the students' inclinations towards entrepreneurship. For the scope of developing the regional economies and society in general universities play a fundamental role in the promotion of entrepreneurial education. *Mahlberg* (1996) accepts this observation, claiming that schools and universities have a key role in promoting entrepreneurship since educational institutions are ideally considered as places "to shape the entrepreneurial culture and the aspirations of students during their studies, in such a way as to give them a better chance of survival in a difficult business setting like today's" (Autio et al. 1997; Landstrom 2005). This could happen because universities are the "cradle of entrepreneurship", able, therefore, to teach their students the way to think and behave in an entrepreneurial world. For this reason universities should position themselves as nuclei of entrepreneurship, giving a substantial contribution in favouring an entrepreneurial atmosphere that combines factors that contribute to the development of entrepreneurship (Gnyawali and Fogel 1994).

As a provider of programs for the training of entrepreneurs university must do its best to try to create a favorable entrepreneurial atmosphere that can encourage entrepreneurial activity, and that in turn would contribute to the development of an enterprise culture among university students, who shall be tomorrow's entrepreneurs. Therefore, it is important to pass on a positive image of entrepreneurship as a career possibility and to attract the attention of the students within the university setting, making resources and other structures available to them.

It must always be remembered that, even though individuals possess entrepreneurial knowledge and abilities, if they are not in possession of a positive image

regarding entrepreneurship, they might not, in the end, adventure into this field (Alberti et al. 2004). For this purpose in mind, the creation of an entrepreneurial culture on campus means that universities can positively influence students' decisions to create enterprises. Students' preferences towards an entrepreneurial career are easily influenced by the setting and the family in which they interact. Given the important role universities may play in promoting entrepreneurship among university students, it is hypothesised that: "The role of promoting entrepreneurship carried out by universities increases the probability of Italian students becoming entrepreneurs in the creation of new enterprises".

7.2 The Content Necessary for an Entrepreneurial Curriculum

Knowing how to teach entrepreneurship seems to be a key factor for the development and promotion of a propensity of the student for the creation of new enterprises, although, because of the multi-disciplinary nature, agreement on the question of entrepreneurial pedagogy, which seems to be in a continuous state of becoming, has never been found (Postigo and Tamborini 2004; Postigo et al. 2006; Rajkonwar 2006; Raymond and McNabb 1993; Rees and Shah 1986; Robinson and Haynes 1991; Roffe 1999; Ronen 1983; Sabine et al. 2005; Salsano 1993; Say 1834). On the subject of entrepreneurship, there has been more than a few debates on how, who and what to teach, with contextual and conceptual interpretations (Baumol 1868; Blanchflower 2000; Braunerhjelm 2007; Cole 1942, 1946, 1949; Evans 1959; Evans and Jovanovic 1989; Evans and Leighton 1989; Folta et al. 2010; Gartner et al. 2004; Gilad and Levine 1986; Gimeno et al. 1997; Hisrich 1998; Hisrich and Peters 2006; Hisrich et al. 2005; Kirzner 1973; Knigth 1942; Kuratko and Hodgetts 2004; Lambing and Kurehl 2006; Mazzarol et al. 1999; Reynolds et al. 2002; Ronen 1983; Sexton and Kasarda 1991; Stevenson and Sahlman 1982; Storey 1982). Despite this impasse, entrepreneurial education has always won the attention of the academic world.

Edwards and Muir (2005) express the same point of view, that is, that the entrepreneurial syllabus is developed in a different way in each university, either as an optional module in business courses or as courses specifically on the subject of entrepreneurship. Thus, the great challenge of the teaching sector is the adequacy of the syllabus and teaching methods under development for inculcating entrepreneurial competences and abilities in students (Garavan and O'Cinneide 1994). As for the content of entrepreneurial courses, *Brown* (1999) indicates that the content of an entrepreneurial course must be informal with the most practical methods of teaching possible. He then describes the basic structure for courses in entrepreneurship, that should touch on:

- Thinking of entrepreneurship as a career.
- Taking the example of speakers who are expert entrepreneurs.
- Developing critical thought, i.e. the type of thought characterised by the mental processes of discernment, analysis and evaluation.
- Experience—through giving students access courses in order to make them acquire the necessary competences to access the entrepreneurial world.

In reply *Vesper* (2004) classified the four knowledge areas useful for entrepreneurs. The content of the entrepreneurial course should be developed on the basis of this knowledge:

1. Knowledge of the business in general—applicable to most enterprises, among which new enterprises.
2. Knowledge of business risks in general—applicable to most start-up enterprises.
3. Knowledge of the opportunities for development—meaning the discovery of a new unserved market and how to use the resources available to enter this new market.
4. Knowledge of specific risk—the knowledge of how to produce a particular product or particular goods.

In terms of teaching methods, different researchers propose different approaches to providing entrepreneurial knowledge and abilities to students (Audet 2000; Béchard and Toulouse 1998; Becker 1993; Binks and Starkey 2006; Black and Smith 2006; Blanchflower and Oswald 1998; Bligh 1998; Brand and Halaby 2006; Bratti 2002; Braunerhjelm 2010; Braunerhjelm et al. 2012; Brewer et al. 1999; Bygrave 2004; Campanella et al. 2013; Charney and Libecap 2003; Clayton 1989; Co and Mitchell 2006; Collins et al. 2004; Cooper 1981; Dale and Krueger 2002). Therefore, there has been a succession of numerous approaches for teaching entrepreneurship that go from more conventional approaches, like text books and exams, to non-conventional approaches to *business planning*, like the life stories of entrepreneurs who work with companies, holding conferences, fieldwork or visits to entrepreneurial organizations (Cooper et al. 2004). The non-conventional methods are slowly substituting the traditional ones, so as to avoid students becoming passive learners that limit themselves to being "fed" in class by teaching too distant from the real business situations that they shall inevitably encounter. It should be added that, considering abilities and skills believed to be critical for entrepreneurs, those touching on "knowing how to be" (that is, strictly connected to personal characteristics, to behaviour and the quality of the potential entrepreneur) have taken on a equally significant relevance to those directly correlated to "knowing what to do" (that is, strictly managerial competences) (Hout and Rosen 2000; Hytti and O'Gorman 2004; Kamau-Maina 2006; Kantis et al. 2002; Karanassios et al. 2006; Kellermanns 2005; Kent 1990; Klandt and Volkmann 2006; Gold et al. 2011; Greene 2002; Gurol and Atsan 2006; Hagan 2004; Hair et al. 1998, 2010; Helmstater 1964; Henry 2003; Herrmann et al. 2008; Hiltebeitel et al. 2000).

The emphasis on both the personal and the managerial characteristics of the potential entrepreneur attributes a growing role to university training, more than ever addressed to the development of professionality and of competences for making clear company dynamics, for optimising production processes, for better knowledge and understanding of the markets, for reducing the running costs of the company and for improving the introduction of advanced organizational solutions for new enterprises (Del Giudice 2008; Del Giudice and Maggioni 2011; Dillard and Campbell 1981; Dilts and Fowler 1999; Dodge and McKeough 2003; Doms et al. 2010; Dunn and Holtz-Eakin 2000; Falck and Woessmann 2010; Falkang and Alberti 2000; Fayolle and Degeorge 2006; Felder and Spurlin 2005; Fiet 2000a, b, 2002; Fleming

Reference Models and Training in Socialization

The effect of reference models on the propensity towards entrepreneurship is widely discussed in the literature (Ghazali et al. 1995; Deakins et al. 2005; Van Auken et al. 2006; Kirkwood 2007). According to Hisrich, Peters, and others, the reference models are "individuals that influence the choice or style of career of an entrepreneur", these models have a fundamental influence on individuals in confirming their entrepreneurial careers, in that they provide useful information about entrepreneurial orientation or a simple moral support. In this context reference models provide individuals *training in socialization*, giving them the possibility of identifying the place they wish to take in the society around them. It is more convincing for an individual to act to become a successful entrepreneur, when he or she has a valid example to follow.

The possibility of having success through ones own abilities becomes real, tangible, and pursuable when there is a reference model that has already beaten the track. This concept, is based on the premise that after having seen successful people from the world of business an individual would be inspired to imitate them and to become a successful business person (Caputo and Dolinsky 1998). Given the importance of the reference models, the role of university students' educators and friends are examined, to understand how they can influence students' propensities towards entrepreneurship.

The role of teachers is indispensible in training, in that they prepare and encourage the students (Boyle 2007). According to *Hytti and O'Gorman*, educators are a fundamental element for the development of effective business training initiatives. The role carried out by the educators, in this case, is that of actively guiding and motivating the interests of students towards entrepreneurship, providing them with experience from real businesses. This is so because the educators have the responsibility of shaping the personality of the students, as well as that of imparting knowledge of the reference models. The role of the educator, in the position of imparter of knowledge, has significant effects on students since the latter tend to absorb everything that an educator teaches them. On the other hand, one must not underestimate the role of friends, who have a strong influence on the propensity of the individual towards entrepreneurship. *Dillard and Campbell* stress that at the time they decide to develop their careers, American students are more influenced by factors external to their family setting, like friends. In this case the force of the peer-group in influencing the decisions to become entrepreneurs is easily recognised. Therefore, one must not neglect the so-called "peer-effect" of those who have had previous experience in freelance work and that have an influence on the single individual's decisions when considering entrepreneurship during a career transition from their current work.

In their studies on the development of entrepreneurship in five different countries *Djankov*, *Miguel*, *Qian*, *Roland and Zhuravska* (2004) conclude that individuals that have childhood friends that have adventured into the business world have a greater probability of taking the road to become entrepreneurs. On the basis of this we may state that the availability of reference models (educators, parents, friends), increases the probability of university students being more enterprising towards entrepreneurship.

1996; Fox 1993; Gault et al. 2000; Gibb 2002). Despite the differences of syllabus and approach, the final goal of entrepreneurial programs is that of stimulating entrepreneurial knowledge among students who, in turn, may increase their interest for entrepreneurship (Sexton and Smilor 1986; Sexton and Kasarda 1991; Williams 2004). The entrepreneurial syllabus and its contents increase the probability of university students of being more enterprising.

7.3 The Influence of the *Family Business Background* and Relevant Socio-Demographic Variables

Research suggests that the influence of the demographic and family context on the propensity towards entrepreneurship of the individual (Koh 1995; 1996; Reitan 1997; Breen 1998; Lin et al. 2000; Dunn 2004; Smith 2005; Veciana et al. 2005. Kirkwood 2007). The common premise of this research is that the student's family, by his or her *Family Business Background*, as well as by past personal experience may have a positive influence on entrepreneurial propensity.

From past research data concerning the role of parents in stimulating the career intentions of their offspring, information about the models of parental behaviour—i.e. the ambivalent role between Family Business and the propensity of the student towards autonomous work—has only been gathered through indirect indicators (Carr and Sequeira 2007). An important objective of our study is that of throwing light on the mechanisms acting on young members of a Business Family that effectively direct them to follow the footsteps of their own family. From the scientific research mentioned above, particular relevance was given to the students' choice of career and to this end we have concentrated our attention on the studies carried out by Ajzen (1991; Carr and Sequeira 2007; Kolvereid 1996 a, b) and on his Theory of Planned Behaviour.

The Theory of Planned Behaviour (TPB) postulates that the entrepreneurial intentions of a student, expressed through his behaviour, are greater and more intense when this individual possesses a favourable attitude towards the destination of that behaviour, has good past work experience and subjective norms that regard his or her behaviour. Besides, empirical studies based on TPB demonstrate that intentions are the best predictor variable of any planned behaviour, including the intention of the student to start an entrepreneurial career (Krueger and Carsrud 1993). From the perspective of career development, it has been noted that the choices and aspirations of students constantly change, passing from an abstract state to more realistic options as they get older (Hartung et al. 2005). With adolescence and more specifically during the years of education, an important evolutionary task is that of exploring the various career and development possibilities that are coherent with the student's own abilities, competences, values and interests (Kracke 2002). Because of the family connection, the career possibilities of a student involved in a family run business include not only regular work (outside the family business) or starting a new business (new business creation) but also, and above all,

the possibility of taking on a position of leadership as the successor in the family business. According to ability, interest, the connection with the family, the student may perceive the option of potential succession as an opportunity or as a burden.

For example being the head of a family business requires the capacity of taking on responsibility, an interest in the business sector of the company, and the will to work in strict contact with other members of the family. In comparison, founding a new company requires, on the one hand entrepreneurial ability, but also allows the individual to choose his own area of interest and to work independent of family restrictions. At the same time, regular work outside the family business means a free choice of areas of interest most compatible with the individual's own personality, with their desire for independence, and for less responsibility for the family and for its business. However, both the career options may also be accompanied by the disappointment of parents and the consequent problem of finding an alternative to guarantee the survival of the family business.

These examples demonstrate the complexity of such students' career planning especially if their choice is connected to the context of a family business and show that an offspring's choice to undertake a career in the family business is probably the reflection of the individual capacities and interests and of the pros and cons of each choice possible.

Scientific research has often shown the stability of the professional interests expressed by students. *Falck*, *Heblich and Luedemann* (2010) showed how the stability of career aspirations from adolescence to adulthood makes a previously expressed entrepreneurial intention more concretizable. In their study students who had already declared entrepreneurial intentions at the age of 16 were seen to have a significantly higher probability of being entrepreneurs at 33 compared to students who had not declared any entrepreneurial intention. Besides, *Schmitt* (2007) showed a relationship between entrepreneurial interests at the age of 13 and the setting up of enterprises and other entrepreneurial activity about 20 years later. Given the empirical support for the predictive value of intentions with regards to later behaviour and the stability of career aspirations, it is presumed that the intentions of potential successors already expressed in adolescence concerning autonomous work in adulthood may have a substantial impact in the planning successions and the consequent survival of a family run business. Following an approach on the length of the pathway of individual growth (Lerner 1982), it is seen that the ends of development (for example, career success) are the result of the synergy between individual resources (for example, personality traits, gender, order of birth) and contextual factors (for example, the support of parents, reference models role of autonomous workers). In the following section, we shall present the results about the determiners of context that influence the student's choice of an entrepreneurial career.

Starting from the various different results presented in previous research, this study aimed at convalidating the relationship between the socio-demographic variables of university students and their family background. For this purpose it is necessary to pay constant attention to an element of great importance for the student and his/her entrepreneurial career choice, that is, identification with the family business.

Characteristics	Researched by
Gender	Ghazali, Ghosh, & Tay (1995); Kourilsky and Walstad (1998); Phan, Wong, & Wang (2002); Dunn (2004); Seet and Seet (2006)
Ethnicity	Blau (1985); Wang and Wong (2004); Othman, Ghazali, & Cheng (2005)
Religion	Adas (2006); Graafland, Mazereeuw, & Yahia (2006)
Age	Lorrain and Raymond (1991); Weber and Schaper (2003)
Birth order	Koh (1996)
Places of origin	Zainal, Grigga, & Planisek (1995)
Programmes of study	Crant (1996); Koh (1995); Lena and Wong (2003)
Working experience	Ghazali, Ghosh, & Tay (1995); Kristiansen and Indarti (2004); Othman, Ghazali, & Sung (2006)
Parents' business background influences	Crant (1996); Sanders and Nee (1996); Koh (1996); Fisher and Padmawidjaja (1999); Tkachev and Kolvereid (1999); Dunn (2004); Wang and Wong (2004); Veciana, Aponte, & Urbano (2005); Kirkwood (2007)

From: Keat, O. Y., Selvarajah, C., & Meyer, D. (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. *International Journal of Business and Social Science*, *2*(4), 206-220.

Fig. 7.2 Demographic characteristics and family business background

The theory of Social Identity (Tajfel and Turner 1985) postulates that a person's self-image is the combination of many social roles (for example, son/daughter, student, potential successor, etc). Identification has been defined as the process of integration and belonging to a specific group or organization in the real sense of self (Cole and Bruch 2006). In this way individuals that identify themselves with an organization perceive themselves as a founding unit of the same and in general believe in the objectives of the organization and have the desire to contribute to achieving its objectives (Ashforth and Mael 1989). Continuing with the Theory of Social Identity and the quest for organizational identification (Ashforth and Mael 1989), *Sharma and Irving* (2005) proposed that the alignment between the individual's identity and that of the family business is an important element in the desire for undertaking a career inside the same. Work experience in the family business is provided on the rationale of developing a strong desire to contribute to its success in descendents. For this to be followed by the decision to start a career within the same needs the establishment of a strong link for which the family company is an important part of the personality of the student (Fig. 7.2).

The results of studies by *Brandstätter* (1997) and *Zellweger et al* (2011) consider, instead, the gender (male or female) as a determining social variable for the career of successor in the family firm, or as founder of a new enterprise and as being incisive on the entrepreneurial propensity of the student.

Zellweger et al. stressed that women showed a greater probability of opting for an independent occupation rather than having success in the family business. *Brandstätter* reported a higher percentage of women among heirs than among the founders of private companies. These data derive from the fact that women, even though not explicitly excluded from the list of candidates for succession, start out with a disadvantage for being accepted as successors. For example, *Innarelli* (1992) stressed how women are considered as successors mainly only when all the descendents of the founders are female. *Dumas* (1992), in his explorative study, showed that in the eyes of their parents daughters are almost invisible as potential successors and that they are only taken into consideration if a critical accident forces the family to do so. This set of considerations suggests that gender strongly influences a student's aspirations towards an entrepreneurial career in a family firm.

Other investigations, instead, show that male students and students with self-employed parents have a greater inclination towards entrepreneurship and that university students with previous work experience are more inclined towards entrepreneurship than those without work experience. Therefore, having previous work experience is an advantage for the student, in that he/she has greater competences and abilities and, above all, a good network of acquaintances, necessary for starting a joint venture with trust.

The influence of the family on the professional development of the student has been corroborated for some time (Schulenberg et al. 1984). For example, the student's attitude towards work is strongly influenced by their own work experience, by emotions transmitted by family members, as well as the work conditions of the parents.

Kalil, *Levine and Ziol-Guest* (2005) also discovered that the work characteristics of the father (but not the mother) in terms of autonomy, responsibility and complexity of work may be connected to the preferences expressed by boys and girls in looking for similar work. Every student has precise impressions connected to their parents' work (satisfaction at work and tension of the role) and these impressions significantly influence their future career decisions (Simoni and Labory 2006; Siropolis 1982; Solomon et al. 2005; Souitaris et al. 2007; Spennati 2005; Stevenson and Sahlman 1982; Storey 1982; Suarez et al. 2001; Tackey 1999).

From a theoretical and empirical point of view, entrepreneurship and the search for work in the family business place parents as reference models, key factors for the promotion of the student to autonomous work, it is clear that if a parent manages to pass a positive image of what they do on a daily basis in the family business, thereby transmitting satisfaction with their own work, their children shall be happy to follow in their footsteps, fully committed to take the business to new levels of success.

Students whose mothers are self-employed are more enterprising in "doing business" especially of a family type. It is intriguing to find this information, given that

most of the literature only takes into consideration the influence of self-employed fathers (for example, Dunn 2004; Van Auken et al. 2006). Perhaps this is a reflection of the education process in the students' infancy, indicating that mothers carry out a role of vital importance in the education of children, thereby establishing a special parent-child relationship and therefore easily influencing their decisions.

Research carried out on the role of parents in the developments of students' careers shows their influence on the career planning of the student (Otto 2000) particularly with reference to mothers considered as the most important interlocutors in the process of creation of future career plans (Dietrich and Kracke 2009; Scarborough and Zimmerer 2003; Schaper and Volery 2004; Schröder et al. 2011; Scott and Twomey 1988; Sergeant and Crawford 2001).

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Chapter 8
Student Immigrants and the Usefulness of Diversity: The New Face of Entrepreneurship

Manlio Del Giudice

8.1 Factors and Conditions Shaping Ethnic Entrepreneurship

The global economic crisis occurred starting from 2008 has deeply marked all the advanced economies: the reduction of purchasing power from the American consumers resulting from the loss of the property values (−25 % only in 2008), the fall of the Stock Exchange values (−40/50 % in the main world Stock Exchanges) which has lead the savers to increase their propensity to save, the fall of value of the Pension Funds in the Anglo-Saxon countries, the tightening of bank credit which has conveyed its reflexes on consumers and enterprises especially in Europe. Such economic and financial worldwide crisis made arousing a second phase of the globalization which is now displaying the change of numerous economic and managerial paradigms, competitive sceneries and relationships among the enterprises. Thus, new competitive rules emerged which, particularly in the emerging economies, are producing complex and variegated effects (Anderson and Platzer 2006; Aston et al. 2006; Barclays SME Research Team 2005; Bachu 1985; Bhattacharyya et al. 2003; Botham 2004; Botham and Mason 2007; Bound 2007; Deakins et al. 2005; Dhaliwal 2000; Girma and Yu 2002; Girma et al. 2002; Gould 1994; Hayer and Ibeh 2006; Janjuha-Jivraj 2003; Jones and Ram 2003; Jones and Elias 2005; Kropp and Suran 2002; Lambert 2003).

Seemingly, management researches about the most suitable conditions which are likely to encourage the local entrepreneurial development have progressively become more inflamed (Leadbeater and Wilsdon 2007; Leitch 2006; Li 2006; Lloyd-Reason and Mughan 2006; Mascarenhas-Keyes 1977; Mascarenhas-Keyes 1987; Mascarenhas-Keyes 2006; Mascarenhas-Keyes 2007; McEwen et al. 2005; Metcalf et al. 1996; Modood 1997; Modood et al. 1997; Owen 2003; Pang 1999;

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The Immigrant Entrepreneurship in Italy

The immigrant entrepreneurship appears to be strongly concentrated in their communities and influenced by the economic dualism that characterizes the Italian manufacturing. Approximately 87 % of businesses whose owners have foreign citizenship actually lies in central and northern Italy (84,179 entrepreneurs in the North-West, 36.7 % of the total 55,314 in the North-East 24.1 % and 60,617 in Central 26.4 %) and 78.2 % is concentrated in six regions: Emilia Romagna, Veneto, Lombardy, Piedmont, Tuscany and Lazio. In the remaining 14 regions the weight of the Italian companies of immigrants is absolutely residual, with values ranging from 3 percentage points (in the case of Sicily and Campania), or less than 0.5 % (Umbria, Valle d'Aosta, Basilicata and Molise). Tuscany is the region with the higher rate of immigrant entrepreneurship (6.8 per 100 foreign companies registered holders). The immigrant entrepreneurship is a phenomenon that in recent years has shown an undeniable vitality scoring rate of growth that marked much of the crisis between 2008 and 2009 was only attenuated. The rates of change related to the stock holders of business immigrants recorded since 2008 (respectively +12.5 %, +11.0 %, and +9.8 %) mark in fact, a deceleration compared to those of the 2 years preceding the recession (+20.0 % and +19.3 %, respectively in 2007 and 2008) but remains very high values of both absolute and relative terms (CNA, The Foreign entrepreneurship figures in Italy in 2010, 2010). According to Unioncamere, at the end of 2010 the total foreign holding of any office in the national business system (as mentioned above, as business owners and/or partners and/or directors) stood at 415,394 units (Unioncamere, Annual Report 2011). This is a figure growing at a dizzying pace in recent years if you think that it did not reach 300,000 units in 2005. Going to refine and narrow down the Unioncamere data to stricto sensu entrepreneurs, at the end of 2010, the total number of business owners who are present in Italy totaled 228,540, thus showing an increase of 19,712 units over the previous year. Nowadays immigrant entrepreneurs contribute to the production of GDP for 11, 1 %, pay almost 11 billion in social security and fiscal contributions every year, account for about 10 % of total employees, and are increasingly active even in self-employment and entrepreneurship, where they create new companies in this phase of crisis (in the last 4 years the Italian entrepreneurs have steadily declined, while those foreigners gradually increased: in 2010 only the first dropped by 31,000 units, the latter increased by 29,000) (Caritas Report 2010).

Pollard et al. 2004; Porter and Ketels 2003; Portes et al. 2002; Prashantham 2007; Public and Corporate Economic Consultants 1998). Particularly during the last years, an extraordinary entrepreneurial phenomenon has been locally arising: while many firms went bankrupt or started deep HR downsizing processes and

delocalization as a consequence of the previously described recession, a contrario new opportunities emerged from enterprises promoted by immigrant people (Putnam 2000; Ram 1994; Ram et al. 2001a, b; Ram and Jones 1998, 2002; Ramsden 2004; Rauch 1999; Rindoks et al. 2006; Rose and Andrew 2005; Sainsbury 2007; Saxenian 1999, 2002; Shang 1988; Smallbone et al. 2003, 2005; Smith 1974, 1976; SQW Limited 2005; Strebler et al. 2006; UK Trade and Investment 2006; Varney 2006; Vertovec 2006; Virdee 2006; Watson 1975, 1977; Wadhwa et al. 2007; Zhou 2004).

The researches concerned on this topic, although still not numerous, have shown during the last years, a concrete acceleration, too, even if they still remain substantially marginal compared to the research issues (Codagnone 2003; Bordigon 2005; Einaudi 2007; Ghezzi and Mingione 2007; Colucci 2008; Fondazione Ethnoland 2008; Caritas/Migrantes 2011). That topic has been generally examined, by the international managerial literature, in the twofold meaning of "system of opportunities and bonds" and of "community and reference culture" (Ambrosini 2001; Banton 1983; Barak 2000; Migrantes Caritas 2009; Engelen 2001; Ethnoland Fondazione 2009; Ghezzi 2007; Hammond and Keiner 1992; Jones and McEvoy 1986; Kloosterman 2000, 2001; Kloosterman and Rath 2003; Milliken and Martins 1996; Piore 1979; Portes and Zhou 1992; Unioncamere 2010; Venturelli Christensen 2002; Waldinger et al. 1990; Waldinger 1986, 1994): the first most interesting formulations on the main theme can be identified in the scheme elaborated by Aldrich and Waldinger (1990) and in the model of mixed embeddedness developed by Kloosterman et al. (1999). Aldrich and Waldinger (1990) firstly defined the main variables which influence immigrant entrepreneurship: the market structure, the access to property, the public policies (fiscal, industrial, labour, etc.), the capability of the membership groups of mobilizing resources and encouraging the start-ups.

Kloosterman et al. (1999), instead, offered a more clear and complete model by using the concept of mixed embeddedness; the authors identified, on the side of the offer of entrepreneurship, the set of social relationships (by concentrating on the ethnical networks) in which the potential entrepreneur is inserted and which influence both the start-up and the development of his entrepreneurial course; on the side of the demand, instead, they concentrated their researches on the functioning logics of the markets which, in their turn, are inserted in a wider macroeconomic environment. Particularly in the researches concerning this topic the ethnical networks appear to exert a key role in the genetic process of the immigrant firms: they appear as the main actors responsible of their peculiar growth. Various research branches have been subsequently connected to those issues: e.g., Portes and Sensenbrenner (1993) and Portes (1995a, b), focused on the role of social cohesion generated from the family group in the process of covering the equity gap stemming from the entrepreneurial project.

Starting from slightly different perspectives, Ma Mung (1992) and Zincone (2001) have, instead, deepened into the attitude of the social capital, not only represented by the network of relationships within the ethnical community, but also consisting in the relationships between the enterprises and the not-ethnic customers, to represent the most predominant growth factors for those firms. With regard to this, also the results forwarded by the Italian literature on the topic, emerged from the

researches accomplished during the Nineties (Zucchetti 1997; Chiesi and Zucchetti 2003) have been aimed at underlining the entrepreneurial pathways stemming from the immigrants besides the strictly ethnical dimension (Ambrosini 2003).

Those studies revaluated the role that contact and trustworthy relationships with native members are likely to exert by effectively supporting the start-ups, even in presence of weak relationships with one's own community of origin.

In the managerial literature the scientific invisibility suffered, to date, by businesses run by immigrants may be attributed to several factors thus requiring the development of a well-planned research programme.

Firstly it should rectify both the lack of statistics tracing the quantitative consistency and the development process of this phenomenon over time, as well as the paucity of ad hoc empirical researches, which only appeared from the 1990s, generally referring to specific local contexts (Ambrosini and Schellenbaum 1994; Baptiste and Zucchetti 1994; Terraneo 2000; Zucchetti et al. 1999; Santi 1995; Ires Toscana 2001; Codagnone 2003; Ambrosini and Cioni 2005).

Secondly, it should allow to overcome all the stereotypes and widespread prejudices, which tend to represent the immigrants to the collective imagination as being exclusively banished within marginal segments of the workplace (Ambrosini 2003), or to exalt the individual characteristics and propensities, of a cultural nature, of immigrants coming from certain countries but not of others, in developing autonomous activities (La Rosa and Zanfrini 2003).

8.1.1 Delving into Processes of Ethnic Student Entrepreneurship

The proposed investigation has been founded on the consistent gap emerging from the literature, and provoked by a limited articulation of the interpretative lines inherent to the subject: the starting point of the research, therefore, shall be the analysis of three orders of factors which interact in a yet to be established way but which are currently, truly indicated as reasons for the huge development and quick increase of businesses run by student immigrants:

(a) The demand dynamics of enterprises getting out from the change processes of the economic systems of the receiving recipient society (this kind of study also includes an analysis of innovation and competitive pressure exerted by the companies of immigrant student as a factor in boosting national competitiveness for local businesses. This hypothesis fits the line of ethnic business studies: when large companies began to accentuate their outsourcing to cut costs, at the same time they seemingly began to encourage employees to start their own and to become subcontractors. That's because, at that moment foreign workers showed themselves as the most available ones. This has caused rapid development of numerous

small companies founded by immigrant students who had only the origin of ethnic entrepreneurs: that originated a pattern of behaviour which has become an integral part of the currently dominant economic and social development paradigm. Some of these realities, with time, showing more innovation capabilities, firms have come to replace the original clients, becoming their competitors).

(b) The role of supply.

(c) The role that the context, not only regulatory, has in favouring (or, on the contrary, inhibiting) immigrant student entrepreneurship (i.e., the problems concerning the modalities of funding used for the initiation and development of new ventures and to evaluate the influence exerted by the remittances made to and from countries of origin of immigrant entrepreneurs. Among the reportable weaknesses in relation to immigrant student businesses, moreover, are of particular relevance to those involving financial structures. The phenomenon is complex and involves both the same mentality and approach with which the immigrant business demands place respect to the financial world, both the institutions themselves, not always "can" or "intending to" respond appropriately to the demands of this component of the production system).

With regard to the demand side, in instable, highly fragmented production systems, oriented to a logic of conversion to the tertiary sector, decentralisation and subcontracting, the literature appears to be concentrated on the demand not only for the workforce of lower-paid dependent workers, but also of autonomous activities with modest entrance barriers, intense work rhythms and wide cost compression (Palidda and Consoli 2006).

From the researches carried out to date (Piccone Stella 2003) it emerges that the autonomous activity of immigrants is generally concentrated in the metropolitan areas, where there is a considerable demand both for services to businesses and services to individuals and families. Thus, the conditions are set for a clustering of the immigrant student businesses as a function of the demand to be served: the baseline assumption is that immigrants tend to undertake the most tiring, most precarious, least financially rewarding and least socially recognised activities and those which tend to be disdained by the native people. Therefore, support could be found for the hypothesis, as yet not investigated, that competitive conditions do not develop between native and foreign businessmen and that there is, rather, a sort of complementary pattern between those groups.

On the supply side, instead, the literature principally deals with the ever more frequent orientation of immigrants towards exploring the possible pathways which lead to micro-entrepreneurship (Esser 2000; Palidda and Consoli 2006). The settlement processes of the numerous national groups may induce needs and specific demands connected to the supply of products and services belonging to their relevant cultural tradition, and not otherwise found on the market, on the part of immigrants and their families. The expansion of such an "internal" market to the community can also have repercussions on the host society, extending from a strictly "ethnic" clientele to a wider group attracted by competitive prices and by the curiosity to experiment with new products.

The last point for the construction of the research hypotheses concerns in the role which, according to another branch of the literature (Baptiste and Zucchetti 1994; Ambrosini and Cioni 2005), the context, not only regulatory, and the ethnic networks can play in the setting-up and development phases of autonomous activities, where the centrality of the ethnic dimension emerges as the essential factor for the development of the foreign entrepreneur. For the student immigrant, belonging to a community of compatriots linked to each other by blood and/or friendship makes available the material and non-material resources necessary for starting out on the road to entrepreneurship: for example, for the formation of the initial capital, for finding a trusted, flexible and low-cost workforce or for obtaining information and better financial terms with clients and suppliers. The identified factors allow the immediate "extraction" of a series of macro-classes of raw hypotheses:

(A) A first class of hypotheses is inherent to the genetic process of the immigrant student business and the profile of the immigrant student entrepreneur: the connotation of "ethnicity" associated with the entrepreneurial experience of the immigrant student may refer to different characteristics of the enterprise, regarding the products/services offered and connected to the origins of the entrepreneur, or to the market, in the case of an enterprise aimed at a clientele which shares the same origin as the entrepreneur. As a consequence, on the basis of the rapport between the characteristics of the product offered and the market of reference, it shall be possible to identify a series of entrepreneurial ideal types, like:

- "ethnic" enterprises, where the demand derives principally to its own immigrant community of reference;
- "intermediate" enterprises, which, though serving principally their own compatriots, in fact provide services of a non-ethnic type;
- "exotic" enterprises, characterised by the offer of ethnic products also aimed at subjects outside the ethnic community of reference;
- "open" enterprises, in which the ethnic dimension is not very visible and/or relevant;
- "refuge" enterprises, which address residual spaces of the work market.

These considerations yield three macro-hypotheses:

[A-H1] The immigrant student enterprises have a strong ethnic specialisation; they are highly clustered: the hypothesis is that the growth rate differs according to the ideal type considered.

[A-H2] The start-up moment represents the expression of a transformation path out of educational background, made by a subject already in possession of a regular employment in the same sector of activity; instead, it is hypothesised that the motivation of emerging from a condition of irregular work is less frequent.

[A-H3] There is a consolidated correlation between the sector of activity (section, industry) and the country of origin but a correlation between

experience/capacity/competence attained and the business activity carried out has not yet been verified empirically.

(B) A second class of hypothesis concerns the possible relationships between the success of entrepreneurial initiatives and its antecedent variables, both in a positive sense (geographical origin of the student entrepreneur, integration between different cultures, sector of economic activity of reference, codified script in the management processes, etc.) and in the negative one (language difficulties, scarce knowledge of the norms, excessive bureaucracy, complex recognition of foreign academic qualifications, problems with credit access, etc.). The investigation shall require a qualitative as well as quantitative deepening, focusing research on specific typologies of immigrant student enterprises.

Research questions emerge focused on the importance of the contact and the interaction between different cultures (native and immigrant), coexistence inside and outside the same entrepreneurial organisms (cross-cultural management). The success of the immigrant enterprises is hypothesized to get out from the consciousness of the differences emerging in themselves (diversity management) and in an efficient planning of managerial tools which allow exploiting such diversity, either on a professional side (knowledge, skills and capabilities) or on a personal one (entrepreneurial propensity, managerial styles), compatibly with the management of the organisation itself (Chemers et al. 1995; Wieviorka 2001).

Following those premises two new pathways for empirical verification emerge:

[B-H1] The social capital (ethnic network of inter-personal relationships) represents a critical success factor for the immigrant student enterprises, as compared to the economic capital (resources available to the immigrants), to the human capital (level of education, communications ability, past experiences, learning capacity) and to the support of external public organisations.

[B-H2] The success of the immigrant student enterprises depends on processes of cross-cultural management set up within themselves and on the governing of intercultural relationships (diversity management) present within it.

(C) A last class of hypotheses shall verify the effect of immigrant student entrepreneurship on the local context, in the present phase of economic recession. Through the analysis of the start-up/growth rates of such enterprises and comparing these one with data stemming from the start-up/failure of the corresponding "national" enterprises in loco it shall be possible to understand whether what emerges some years after start-up are real virtuous processes and spontaneous business growth, or simply entrepreneurial initiatives destined to merely survive. The latter deriving from the mere subcontracting strategies adopted by autochthonous enterprises, aimed at unloading the social costs (salaries, contributions,

etc.) and part of the business risk onto immigrant workers, obliging them to set up enterprises by themselves (the case of so-called pseudo-enterprises). In this case, such premises give rise to three alternative research verification points:

[C-H1] It is possible to hypothesise that there is an ongoing real substitution effect of immigrant student enterprises with respect to the "national" ones and especially in some specific sectors.

[C-H2] The immigrant student enterprises are de facto simply filling a supply gap in sectors with low entrance costs, thereby integrating themselves with local enterprises which are already present and constantly looking for services at a good price in "less noble" sectors.

[C-H3] The immigrant student enterprises are contributing, at several levels, to strengthening the local entrepreneurial fabric by creating new synergies with the existing "native" enterprises and with the new start-ups, thus by creating renewed needs for intercultural management and diversity management within the enterprise, as well as cross-cultural entrepreneurship, within the local context considered.

The proposed research, besides offering a concrete contribution to the reduction of the substantial supply gap in the material present in the literature on the subject, should also ease the construction of a model which could support policy makers and stakeholders in the elaboration of active policies for the support and promotion of ethnic student entrepreneurship (Brooksbank and Jones-Evans 2005; Carter and Shaw 2006; Chan 1986; Cheng 1994; Chester and Bekhradnia 2008; Connor et al. 2003, 2004; Fraser 2006; FreshMinds 2006; Furlong and Cartmel 2005; Hussain and Scott 2007; Leslie and Drinkwater 1999; Metcalf 2005; Shiner and Modood 2002; Strebler et al. 2006; UNITE 2005; Universities UK 2007). Such actions must represent the most propitious occasion for inverting the tendency which, in the last few years, led representatives of the territorial associations and the financial intermediaries to undervalue the immigrant start ups and to restrict their access to credit, unjustly seeing them as a threat, rather than a concrete opportunity for strengthening the local entrepreneurial fabric.

Student Entrepreneurs Reach Out to Immigrant Community

Two students who turned into business partners, Aung Kaung Myat and Mustafa Abdo, both seniors at Buffalo State, started their new business, IT Garden, LLC, on June 8, 2013. The company provides a series of computer and phone support services and products.

Myat is from Burma and reached the USA in 2008, while Abdo is from Singapore and arrived in 2007. Despite being from different countries, they are both united by the willingness to assist the population in Buffalo, where they have relationships as well as many interpersonal connections.

(continued)

Myat and Abdo first met at the Erie Community College, where they made the decision to start up a technology venture together. They later attended Buffalo State, where their decision turned into reality. Abdo believes that small businesses are the backbone of the community, and the true purpose of his firm is to help people solve their issues.

While Abdo began researching the technology market, Myat was taught the basics of entrepreneurship at the Buffalo Adult Learning Center. Myat created the business plan while Abdo implemented it. The plan was developed also with the assistance of Meg Dee, Buffalo State Community Academic Center Director, and Bonnie Smith who is the economic development director of the Westminster Economic Development Initiative.

The next step was to find a good location for the business. The two partners chose a place in the center of Buffalo that seemed ideal for the demographic of their market. Myat and Abdo sell tech products at reasonable prices, providing at the same time a number of technology-related services regarding computers and mobile phones. They are not mere salesmen, but they also fix tech devices trying to solve any problems people could have.

Myat and Abdo do not only run their business, but they are also engaged with the immigrant and refugee population in the area. They have always helped the community but now they have a greater opportunity. They help people who do not know English well understand letters and bills, and address their issues correctly, but they would love to do much more. Myat and Abdo come from immigrant or refugee backgrounds so they know well what are the problems these people may face. The two men believe that their business should not be simply focused on making a profit but also on assisting people, they have a very human approach to business and are happy when they see a nice smile on somebody's face.

Together, Myat and Abdo speak seven languages: Arabic, Burmese, English, Malaysian, Nepali, Somali and Thai. For this reason, they have become a beacon in the area for immigrants and refugees, and they want to reach even more customers, by expanding their business, ordering new products, and creating their own website. In fact, IT Garden is attracting an increasing number of people and can truly help to improve the neighborhood's economy.

Source: http://www.buffstaterecord.com/593/culture/student-entrepreneurs-reach-out-to-immigrant-community/.

Appendix: Concepts and Implications for Definitions of Ethnic Entrepreneurship

Ethnicity

Title	Author	Definition
1. Green E., Endogenous Ethnicity, Department of International Development, 2011	• (Ordeshook and Shvetsova 1994)	"ethnic diversity is an exogenously determined social state"
2. Volery T., Ethnic entrepreneurship: a theoretical framework, Handbook of research on ethnic minority entrepreneurship, 2011	• (Masurel et al. 2004)	"An ethnic group is made up of people who have some or all of the following characteristics: • a common proper name, • one or more elements of common culture which need not be specified, but nay include religion, customs, or language, • unique community of interests, feelings and actions, • a shared sense of common origins or ancestry, and a common geographic origin."
	• (Fregetto 2004)	"Ethnic and immigrant groups are equipped with culturally determined features such as dedication to hard work, membership of a strong ethnic community, economical living, acceptance of risk, compliance with social value patterns, solidarity and loyalty, and orientation towards self employment. These features provide an ethnic resource which can facilitate and encourage entrepreneurial behavior and support the ethnic self-employed."
3. Danes S., Lee J., The effects of ethnicity, families and culture on Entrepreneurial experience: an extension of sustainable family business theory, International small business journal, 2011	• (Dimov 2007)	"In contrast to culture, ethnicity is an individual characteristic, a form of *human capital*. Human capital is considered the most fundamental form of capital. Human capital consists of skills and abilities vested in people."

Ethnic Entrepreneurship/Entrepreneur

Title	Author	Definition
1. Volery T., Ethnic entrepreneurship: a theoretical framework, Handbook of research on ethnic minority entrepreneurship, 2011	• (Greene and Owen 2004)	"Ethnic business typically starts when an entrepreneur begins serving other members of the ethnic community and satisfies their specific ethnic needs."
	• (Butler and Green 1997)	"Foreign entrepreneurs can be defined such as 'immigrant entrepreneurs,' 'ethnic entrepreneurs' and 'minority entrepreneurs.' Immigrant entrepreneurs refer people who start their own business just after their arrivals using of their individual connection with former immigrants and non-immigrants with a common origin."
	• (U.S. Department of Commerce 1997)	"..foreign business owners such as 'minority entrepreneurs' who are not of the majority population.."
	• (Waldinger et al. 1990)	"Ethnic entrepreneurs create a set of connections and regular patterns of interaction among people sharing common national background or migration experiences."
	• (Leung 2002)	"Ethnic enterprises rapidly pop up with the expansion and growth of an ethnic community and include businesses such as travel agencies, garment shops, specialized grocery shops, tearooms and fast-food stands."
2. Adiguna R., Habib Sha S., Exploring Transnational Entrepreneurship: On the Interface between International Entrepreneurship and Ethnic Entrepreneurship, 2012	• (Honig and Drori 2010)	"Ethnic entrepreneurship includes entrepreneurial activities that involve individuals whose group membership is tied to a common cultural heritage or origin and are known to out-group members as having such traits."
	• (Terjesen and Elam 2009)	"Individual actions of an immigrant, often with distinctive language and customs, engaged in formal, informal, or illegal self-employment and/or businesses in adopted country; also entrepreneur's role and position within an ethnic community network."
	• (Levent, Masurel and Nijkamp 2003)	"Ethnic entrepreneurs with their untapped job-creating potential offer (i) different approaches and management styles within urban economic life which reflect their cultural diversity; (ii) many opportunities for urban revitalisation/development of local economies, thereby increasing economic and cultural diversity, reducing unemployment and social exclusion, mitigating the problematic employment situation of young people in the ethnic segment and raising living standards in ethnic groups that often belong to the more disadvantaged segments in society."

Diversity

Title	Author	Definition
1. Simons S., Rowland K., Diversity and its Impact on Organizational Performance: The Influence of Diversity Constructions on Expectations and Outcomes, Journal of Technology Management & Innovation, 2011	• (Gonzales and Denisi 2009)	"..differences between individuals on any personal attributes that determine how people perceive one another."
	• (Christian et al. 2006)	"..most diversity research focuses on demographic attributes, including age, gender, race-ethnicity, functional background, educational background, and tenure.."
	• (Van Knippenberg and Schippers 2007)	"..diversity in workgroups can have both positive and negative effects.." "There have been a number of types of diversity classification proposed in the literature, not all of which are defined consistently. A majority of these diversity characteristic classifications are based on perception and are dichotomous in nature. Some of the classifications that can be identified in the literature include readily detectable/less observable, surface-level/deep-level, highly job-related/less jobrelated, task-related/relations-oriented, and role-related/inherent dimensions. However, the majority of these classifications can be broken down into two perspectives, the information and decision making perspective and the social organization perspective." "..diversity of values, rather than diversity of demographic characteristics, was more likely to be at the heart of negative effects on team performance."
	• (Estergaard et al. 2011)	"Study used social diversity characteristics only, including age, gender, ethnicity, and education Education and gender were positively associated with innovation, age had a negative association, and ethnicity had no effect."
2. Janssens M., Steyaert C., Theories of Diversity within Organisation Studies: Debates and Future Trajectories, Nota di lavoro-Fondazione Eni, 2003	• (Carter et al. 1982)	"..people with different ethnic backgrounds, nationalities, age, religion and social class.."
	• (Pollar and Gonzalez 1994)	"Examples of cultural differences include religion, age, ethnicity and language ability. Functional differences refer to the differences in the way we learn, think, process information and deal with authority. Historical differences refer to family make-up, political opinions and inter-group relationships."
	• (McGrath et al. 1995)	"An often cited categorisation of diversity is the following five clusters: 1. Demographic characteristics such as age, ethnicity, gender, sexual orientation, physical status, religion and education 2. Task-related knowledge, skills and capacities 3. Values, views and attitudes 4. Personality, and cognitive and attitudinal styles 5. Status in the organization such as one's hierarchical position, professional domain, departmental affiliation and seniority."

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Chapter 9
Female Young Entrepreneurship: Practical Evidence

Manlio Del Giudice

9.1 Introduction

Entrepreneurship is a fundamental phenomenon that has been object of study and research in many countries, due to the social and economical development it induces (Timmons and Spinelli 2004; Kirzner 1979). Generally speaking, the entrepreneurial activity has considerably increased in recent years, as the barriers to entry have never been so low, and access to resources and market opportunities appears to be rather easy.

Entrepreneurship generates economic development and is a significant source of employment worldwide. According to the U.S. Small Business Administration's Office of Advocacy (2007), in the USA small businesses (those with no more than 500 employees) account for 99 % of all employers and provide 75 % of all new net jobs.

Entrepreneurship also activates opportunities because any person, regardless of race, sex or religion, potentially has it: it generates self-sufficiency and self-determination that determine economic growth and social mobility (Timmons and Spinelli 2004). Education is fundamental in the creation of new perceptions associated to women entrepreneurs, and the role of social institutions in this context is increasingly crucial (Krueger and Dickson 1994; Krueger et al. 2000, 2007; Larson and Starr 1993; Lee and Tsang 2001; Lin 1999; Mitchell et al. 2002; Morales-Gualdron and Roig 2005; Ottoson and Klyver 2008; Ripolles and Blesa 2005; Ronstadt 1988; Sanders and Nee 1996; Schenkel et al. 2009; Shapero 1982; Shaver and Scott 1991; Shepherd and Krueger 2002; Shook et al. 2003; Wernerfelt 1984; Arenius and De Clercq 2005; Burt 1992; Busenitz 1996; Carland et al. 1988; Covin and Slevin 1991; Foley and Edwards 1999; Gartner 1988; Gartner et al. 2004; Granovetter 1974, 1983; Hisrich et al. 2005; Hisrich 2006; Hills and Singh 2004; Hills et al. 1997; Kaish and Gilad 1991; Kim and

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Aldrich 2005; Kirzner 1997; Lumpkin et al. 2001; Morris et al. 2001; Shane 2000; Vesper 1996; Wasserman and Faust 1994).

As a consequence of the acknowledgement of the importance of entrepreneurship, several studies have been carried out worldwide by universities, foundations and government institutions in order to examine the phenomenon. The Global Entrepreneurship Monitor (2012), developed by Babson College and London Business School, has been the most significant project investigating entrepreneurial activity in a global setting, providing important cross-country information and measurement.

Entrepreneurship is a very complex concept: here we define it as the process by which individuals known as entrepreneurs create new organizations with new procedures or products based on social opportunities or needs. The creation process requires that the entrepreneur recognize opportunities and exploit them (Kirzner 1973).

As previously stated, opportunity recognition is a core factor in the entrepreneurial process (Ozgen and Baron 2007), as it is the first important step towards the creation of an enterprise (Christensen et al. 1994; Timmons and Spinelli 2004). An opportunity can be identified, assessed, and exploited (Eckhardt and Shane 2003; Shane and Venkataraman 2000). If an opportunity is successfully recognized and developed, a profitable business will be established (Ardichvili et al. 2003). But what is an entrepreneurial opportunity? It is distinguished from other types of opportunities related to profit, since it involves the discovery of new means-ends relationships (Shane and Venkataraman 2000). Eckhardt and Shane (2003) defined entrepreneurial opportunities as "situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships." The authors argued that opportunities arise from the loci of changes, distinguished by Schumpeter (1934) in five different types: those originated from the creation of new products or services; the ones that stem from the discovery of new geographical markets; those resulting from discovery or creation of new raw materials; the ones emerging from new methods of production; and finally those deriving from new organizational methods. According to Drucker (1985), opportunities can be classified into three categories: the generation of new information; the exploitation of market inefficiencies, as a consequence of information asymmetry; and the reaction to changes in costs and benefits associated to different utilization of resources. Singh (2000a, b) took into account three fundamental variables on which entrepreneurial opportunities are founded: entrepreneurial knowledge and skills; a new entrepreneurial idea; and environmental variables, such as economic and social context, and norms and regulations.

What is the purpose of an entrepreneurial opportunity and in which circumstances is it generated? The objective of entrepreneurship is business creation (Gartner 1990). Entrepreneurship implies the collection of resources in order to give birth to a new product or service (Shane and Venkataraman 2000). The difference in price paid for the original resources and the one resulting from their novel combination generates a profit (Casson 1982).

The opportunity recognition process has been variously explained by the relevant literature using different approaches ranging from the psychological (Gaglio and Katz 2001), to the environmental (Shane 2003), sociological (Ozgen and Baron 2007; Singh 2000a, b) and multi-perspective (Ardichvili et al. 2003).

Entrepreneurship has been widely acknowledged as a social process in which opportunity recognition is enhanced by the entrepreneur's social contacts (Christensen and Peterson 1990; Singh 2000a, b; Ozgen and Baron 2007). According to Bhave (1994), this process can be externally or internally stimulated. In the first case, decision to start a new venture precedes opportunity recognition and an entrepreneur makes his choice according to personal and environmental circumstances. In the second case, that of internal stimulation, opportunity recognition precedes the decision to start a new venture, as together with others the entrepreneur is led to discover new solutions to satisfy general needs. According to Shane (2003), new opportunities are revealed thanks to improved access to information and superior cognitive skills. Social ties are fundamental in Shane's model. The social network structure affects the quantity and quality of information acquired, and both weak and strong ties are relevant (Burt 1980; Singh 2000a, b). Ardichvili et al. (2003) considered together the cognitive, psychological and sociological aspects, and stressed that for a business to be successful some elements must coincide. In this model, the process of opportunity recognition begins when entrepreneurial alertness, defined as "the possession of a skill set; a set of perceptual and cognitive processing skills that direct the opportunity identification process" (Gaglio and Katz 2001), is above average.

Shane and Venkataraman (2000) explained the opportunity recognition process on the basis of a factor structure articulated in: search for information, identification, investigation, evaluation, prioritization, action, re-evaluation, new business entry, re-evaluation, success and failure, and final re-evaluation.

Much research has focused on the fundamental role of information in the process of opportunity acknowledgement. Proposed an information processing framework that includes theories of entrepreneurship, psychology and cognitive neuroscience showing how different entrepreneurial needs and attitudes influence the evaluation of informational cues, helping an entrepreneur make his decision regarding a potential business opportunity.

According to Ozgen and Baron (2007), the entrepreneurial opportunity recognition process is influenced by three sources of information:

- Mentors, who, thanks to their experience, help student entrepreneurs.
- Informal networks made by people known by the entrepreneur who provide information useful to detect potential business opportunities.
- Family and close friends, which form the strong ties described by Granovetter (1973a, b) in his work.

A key element highlighted by Ozgen and Baron (2007) is self-efficacy. Within the opportunity recognition process, different people can access the same or similar information through their networks, but not everyone detects a business opportunity, since this relies upon the individuals' opinion regarding the possibility of successfully accomplishing the required tasks (Bandura 1977).

Models and theoretical constructs have considerably evolved over the years, but none have viewed the matter in a gender perspective (Greve 1995; Hindle 2004; Hmieleski and Corbett 2006; Hoang and Antoncic 2003; Jenkins and Johnson 1997; Katz and Shepherd 2003; Kolvereid 1996; Krueger 1993, 2000, 2003; Krueger and

Brazeal 1994; Krueger and Carsrud 1993; Krueger and Dickson 1993). Aldrich (1989) stated that due to the differences between men and women, also the way they are involved and participate in their social networks repeats these differences.

9.2 Understanding Female Entrepreneurship

The specific topic of female entrepreneurship is an even more complex research area than entrepreneurship in general. International research of entrepreneurship is increasing rapidly, but a large number of questions concerning female-owners of enterprises remain unanswered. The number of women business owners increased "dramatically" during the 1980s. The number has increased again in recent decades and policies supporting an entrepreneurial attitude are now evident (Acs and Audretsch 2003; Verheul et al. 2006; Ajzen 1991; Aldrich and Zimmer 1986; Anderson 1990; Bandura 1986; Becker 1993; Bird 1988; Brännback et al. 2007; Burt 1992; Coleman 1988; Cozby 1997; Davidsson and Honig 2003; De Clercq and Arenius 2006; Forbes 1999; Granovetter 1985). However, women are still faced with multiple barriers in terms of professional involvement and reconciling work and family, mainly due to gender stereotypes and rigid gender role perceptions, as well as issues surrounding career breaks.

Women have the potential to be active in business and to develop their career in business, but in practice in many countries this potential is an unused resource. To experience a business career is important for economic and professional development.

The popular literature and some earlier social science research has prepared the researchers to expect to find barriers to a distinctive feminine entrepreneurship. In particular, many authors have attempted to compile a list of characteristics that impede "pink entrepreneurship" (Winn 2004; Mirchandani 1999; Brindley 2005; Greer and Greene 2003). Safiri (2004) proposed a scheme with two dimensions (barriers to social, cultural and economic) and non-structural (personality characteristics and physiology of women).

Other studies of individual characteristics carried out in the 1980s concentrated on psychological dimensions of women entrepreneurs, or women students, and compared these women to women executives as well as to male entrepreneurs and male executives. Sexton and Kent (1981) found that women entrepreneurs had slightly lower levels of education than female executives. Sexton and Bowman (1986) expanded this research using psychological instruments to compare female and male entrepreneurship students on several dimensions including independence, need for control and risk-taking propensity. Interestingly, the authors found differences between female students studying entrepreneurship and those studying other areas of business in terms of conformity, energy level, interpersonal affect, risk-taking, social adroitness, autonomy, change, harm avoidance, and succorance.

Just as is it difficult to mark the boundaries around male and female entrepreneurship in any historical period and it is equally difficult to descibe differentiation within them (Arenius and Kovalainen 2006; Baker et al. 1997; Birley 1989; Brush

1992; Carter et al. 2001; Collins-Dodd et al. 2004; Cozby 1997; Cromie and Birley 1992; de Bruin et al. 2006; De Clercq and Arenius 2006; Farr-Wharton and Brunetto 2007; Fielden et al. 2003; Godwin et al. 2006; Kim and Ling 2001; Klyver and Terjesen 2007; Matthews and Moser 1995; Menzies et al. 2006, 2004; Minniti et al. 2006).

Female young student entrepreneurship is still poorly studied, but existing research is convincing that present support measures are insufficient and the educational system does not pay enough attention to the variety of career development and entrepreneurship as a career option for their graduates (Orser et al. 2006; Timberlake 2005; Ahl 2006; Brush and Hisrich 1991; Brush 2006; Brush et al. 2004; Burt 1992, 1998; Busenitz 1996; Carland et al. 1988; Carter and Allen 1997; De Bruin et al. 2007).

9.3 Lessons to Be Learned from Case Studies

Afrocenchix is a firm started up by two students, Rachael and Joycelyn, who had begun to make hair oils in their university kitchen. Their story is quite inspiring. The two won a prize for innovation from the University of Birmingham. They continue to study full time and now manufacture and sell their own products made from natural ingredients. Rae and Joyce have proved to be very creative, they believe that taking care of our hair and skin on a daily basis is essential to our well-being since almost 70 % of what we rub onto our skin is absorbed by our bloodstream. This is why Afrocenchix believes in the importance of natural ingredients and does not utilize parabens and chemicals that can prevent the pores from breathing and may cause hair dryness and breakage.

The company is specialized in Afro-Caribbean textured hair and through its website www.afrocenchix.com it provides hints for a healthier diet along with free hair care and styling advice.

The business idea was born after Joyce had tried on her hair many products that had not worked as she had expected. She read about the benefits of different natural oils for the hair and skin so she decided to carry out some experiments and concocted some blends she first tried on her best friend Rae, who suffered from eczema and had a particularly sensitive skin that made her allergic to most body products. The outcome was amazing, since Rae realized that her friend's blend did not cause her any allergic reactions so she asked for more. That was the first step of a great venture: much research was performed over a set of hair and skin oils, market tests were carried out, and finally the products were launched and now are sold on line, while a new range is being conceived.

Of course, the start-up had to face a number of challenges, the most difficult of which were finance and time. The Afrocenchix team is made of university students

who study full time and most of them have also part time jobs, so the lack of experience together with finance and time restraints made it hard to start the business effectively. Nevertheless, all the challenges were overcome thanks to good planning and everyone's strong engagement in the project. It is now essential to secure finance in order to ensure expansion.

Rae and Joyce realize they may be an example for others who are willing to start up their own firm. They believe that a new venture should always be fun, but this does not mean it will not be challenging. It is therefore necessary to go all out and do your best without surrendering when pressure seems unbearable and obstacles arise along the way. One must always bear in mind that if one person likes what you do, it is possible that millions also will. The two students express their idea by quoting Malcom Gladwell, "Hard work is a prison sentence only if it does not have meaning."

Rae and Joyce's initial source of inspiration was Madam CJ Walker, who was the first black female millionaire in the USA, and made her fortune creating products for Afro-American hair. The two entrepreneurs have declared that today they find the singer Shingai Shoniwa very inspiring, because she has excelled in her field although she had to face a challenging start. Rae and Joyce are stunned by the way she looks and admire her fabulous hair style. The singer is a superb testimonial of how Afro-American hair can be modern and beautiful. Another source of inspiration for the two young business women are Richard Reed, Adam Balon and Jon Wright who set up the smoothie company Innocent Drinks, after quitting their previous jobs in response to a request by the public that had invited them to make their dreams come true.

Noella Beauty Works was set up by Jackie Pfleuger, a full time student who has also a part time job, and has now become a successful entrepreneur. She manufactures a line of natural cosmetics characterized by high quality and low prices, and sells them on Etsy (www.noellabeautyworks.etsy.com), but her business is also expanding within the traditional sales channels such as boutiques and salons. However, since the business is mainly online, Jackie has focused on the internet utilizing social network tools to maintain her customer base and find potential new customers. In particular, she has created a Facebook fan page (www.facebook.com/noellabeautyworks), a blog (www.noellabeautyworks.blogspot.com), and she sends tweets regarding new products and general information at www.twitter.com/noellabeauty. Thanks to these tools she is able to keep her customers updated and also create interest around her line of cosmetics.

The business idea started many years ago. Since she was a young girl, Jackie had dreamed of making and selling homemade goods. She would have loved to set up a small shop inside her mother's salon, but she was not interest in the money itself, rather in the business aspect. Young Jackie had always enjoyed practical activities such as knitting, sewing or jewellery manufacturing. However, the turning point was the decision to focus on making her own cosmetics, that she initially decided to sell in her own basket at her mother's salon. Public response was positive and it encouraged her to continue until Noella Beauty Works was finally established.

Of course, it was not as easy as it may seem, and the young entrepreneur had to face many challenges while starting up her venture. The most difficult challenge has been time, since Jackie is a university student and works in a cafè, besides being fully responsible for Noella Beauty Works. Her strong motivation is enhanced by the love for her enterprise, although she occasionally feels stressed and it seems there is always too much to be done.

A good planning is essential and priorities have to be set in order to achieve an effective balance among the various activities. Jackie has to study, make her products, sell them and of course she has to maintain her social contacts, not only on line. At first, the experience was overwhelming. In fact, as it was launched, the online store became immediately successful, even more than expected, and a great number of orders arrived, while the products were not even ready for delivery. However, this taught the young entrepreneur a lesson: tasks have to be prioritized and it is important to plan ahead of yourself in order to be always ready. In fact, after the initial hassle, the job has now become less stressful and more manageable.

The best advice Jackie can give to new entrepreneurs is to set priorities and have a plan right from the beginning. It is important to be creative and original and have passion for one's own work. Success will arise if the product is unique and the customer service is high standard. There will be always a lot to learn, but this is how it will be possible to grow, overcome challenges and create something worthy. Jackie's favourite quote is "You better make it count, because you can't get it back."

Jackie's main source of inspiration are both her mother and father. The former has her own hair salon and has always encouraged and helped her daughter since she was little and began to cultivate her passion. The latter has always been a proud father and has never stopped encouraging his daughter to follow her dreams. He also gives her the proper spur to get back on the road when things are not going in the right direction.

9.4 Female Entrepreneurs in India: New Models

The number of female entrepreneurs in India is relatively low, and it is even less common to find start-ups created by female university students. Nevertheless, an increasing number of women at college campuses are deciding to start up their own business ventures.

For instance, Ridhi Agarwal, a fellow programme student at IMM Calcutta, turned down jobs she had been offered and started up an online grocery story in the beta stage with a Rs. 5 lakh investment. The woman believes that entrepreneurship is a double edged sword. Refusing to take a job that would guarantee a fixed income is hard, but Agarwal is a Marwari and feels entrepreneurship flowing in her blood. This is not her first start-up, however it is the first born at university. When she left IIM Kozhikode in 2007, she worked at L&T Finance for a year, but then decided to start up an online library portal, www.xelf.com, with a Rs. 4 lakh investment. After a year she broke even and sold her enterprise before accessing IIM Calcutta. Agarwal thinks that the most frightening aspect is taking the first step in a new venture.

Sangeetha Narasimhan passed out of the Wadhwani Centre for Entrepreneurship Development at ISB, Hyderabad, and has recently launched her consumer tech start-up Twimo. Narasimhan had been a systems engineer at Cisco Systems and turned down the possibility of a career advancement in order to incubate her idea at ISB where she was assisted in developing her project. In this period she started to believe that her venture could come to light. Narasimhan was well aware that not every idea leads to an enterprise, and even if this was to occur it would be perceived as a precious life lesson and not as a failure.

Minnat Lalpuria graduated from ISB in 2012 and started-up 7 Vachan Services, a firm that offers wedding-related services at a discount price. The young entrepreneur admits that she was bold to give up on placement offers and start something new from scratch. Twenty start-ups have been incubated at the centre in ISB, but only four are led by women. Women represent only 10 % of the 200 graduate alumni

entrepreneurs from ISB excluding those with family businesses. However, the number has increased only over the past 4–5 years.

Dr. Krishna Tanuku, executive director of the Wadhwani Centre for Entrepreneurship Development at ISB, recently stated that they were trying to figure out how they could encourage more women to think of entrepreneurship. Their idea was to select five high potential women graduates and assist them constantly for entrepreneurship. However, engineering colleges do not keep pace with B-schools with regard to female on campus entrepreneurs.

At IIT Kanpur's incubation facility only one start-up out of 14 is led by a woman. It is Thinking Threads, a design and communication research company started up by Butool Abbas, that is promoting four newborn ventures, one of which, Oink – a Lifestyle store, has raised Rs. 25 lakh funding. Abbas turned down a job offer from an IT multinational in 2009, since the woman had realized that a corporate job would not have provided her with the experience she was seeking and she would have acquired only by running her own business. Abbas was picked for US Embassy's International Leadership programme specifically devoted to women in 2013. Abbas has always been surprised that there are few women who decide to be entrepreneurs since they are not thought to be the breadwinners and their liabilities are lesser. One only has to consider that the 25 student entrepreneurs at IIT Bombay's incubation centre are all male. An official at the Society for Innovation and Entrepreneurship at IIM Bombay stated that they had engaged with six female student entrepreneurs over the last three or four years but nothing really materialized. The main reason is not lack of interest, but a change in their profile and the emergence of new responsibilities.

Source: http://articles.economictimes.indiatimes.com/2013-04-12/news/38491633_1_wadhwani-centre-isb-incubation-centre.

SheEO Incubation Program Graduates First Cohort of Women Entrepreneurs

A few years ago Vicki Saunders' venture capital fund received over 300 applications, but only four of them had been submitted by women-led start-ups. This motivated Saunders to establish the SheEO $250,000 prize to award the best business idea by a young woman under thirty.

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Later, together with Kaela Bree and Abigail Slater, Vicki Saunders started SheOS's new incubation programme, which has the aim of guiding women-led ventures "on their own terms."

In an interview with Techvibes, Saunders stated that she realized that over the last years a lot of women had turned to her for advice, and that the questions asked by young women are generally quite different from those asked by young men. What is lacking is a place where women can meet and discuss about the way they intend to run their businesses and connect to an incredible female network where they can be helped to achieve success.

No other incubation program for women entrepreneurs, apart from SheEO, has ever been focused on social ventures. Some time ago, ShEO brought together a first cohort of 10 women-led enterprises at Ryerson University. The program was introduced in part by the university and hosted at Ryerson's Digital Media Zone (DMZ).

The program was partly funded by the provincial government and was based on mentoring by ten established women entrepreneurs who behaved as guardian angels for the young ones involved in the project. Their businesses range from fashion to high tech. A $50,000 prize created by spontaneous donation of $5,000 by every single mentor was awarded to the winner of the first SheEO cohort. Actually, when the program ended, the group decided how the funds should be divided.

Based on her experience, Saunders realized how traditional incubator settings did not always deal effectively with the many issues women entrepreneurs have to face, due in particular to fear, boldness, and work-life balance. This way, cohort members are motivated to become great on their own terms, in order to achieve personal and professional success.

Of course, the program can exist only because of the donations by the prodigal angels, so one could think that it could be difficult to replicate it over the years. However, Saunders has never had to convince anyone to participate. Sixty women indeed asked Saunders to take part in the programme, and the entrepreneur has a long list of successful business women who are willing to be the next angels.

As stated by Saunders, the concept of "impact investing" is now emerging out of the market place. Social and environmental returns are appreciated apart from financial returns. In Saunders' network there are many women entrepreneurs who have been hard workers, have gained considerable success in their own businesses and would like to help young women entrepreneurs find their own way.

Not only the angels are willing to assist future cohorts, but also other Canadian universities have expressed their interest in the program, especially after the success experienced by Ryerson.

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A peculiar feature of the ShEO program is its step towards social start-ups and away from the STEM subjects (science, technology, engineering and math). The latter are often emphasized and women are mostly under-represented in this field. ShEO instead is based on a "women for women" approach, and is aimed at mentoring future women entrepreneurs providing them with the resources and role models they require.

After the initial success, it has been decided to take the programme elsewhere. Interest has been expressed globally from New York, to San Francisco and London where new cohorts could be created in the near future.

Wherever the program arrives, the message will not change: women willing to take part in the program will be motivated to adopt a personal approach in order to unveil their own leadership style, without being restrained by a static formula defined in advance.

Saunders believes that, since everyone's ambitions are different, also their leadership style cannot be standardized. To be successful it is important to understand who you are and what you are good at rather than adapting to a predefined model that would like to state how things should be or should be done.

Source: http://www.techvibes.com/blog/sheeo-graduates-women entrepreneurs-2013-08-30.

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