
SCALING UP ENTREPRENEURIAL EDUCATION MODELS AND PROCESSES. CRITICAL ISSUES FOR SUCCESS

ABSTRACT The article discusses the axes of a scaling up framework, for entrepreneurial education projects, identifying the critical factors to be considered. The intention is to conceive a way of thinking about the process, identifying its primary components instead of explaining the factors of success or failure. Advocating for a holistic perspective of “intelligent development” and education models towards entrepreneurship, articulating personal and contextual processes and domains, the key analytical and operational minimal factors (minimum common denominator and minimum common method) are identified to ponder about a scaling up strategy.

KEYWORDS

entrepreneurship, education, scaling up, framework, tree model

JOSÉ SOARES FERREIRA Presidente da Tree Institute – Desenvolvimento Económico, Social e Humano, Portugal

CRISTINA ALBUQUERQUE PhD, Professora auxiliar, Faculdade de Psicologia e de Ciências da Educação, Universidade de Coimbra, Portugal

INTRODUCTION

Enhancing larger levels of functional and productive skills, in order to achieve a more competitive economy, is presently the focus of many political and educational efforts. However, simply “educating for profit” (Nussbaum, 2010) is an impoverished conception of what is needed to achieve a culture of responsibility and creative innovation: the commitment to a critical thinking and an active learning, the capacity to understand and to respond to complex global problems, thus, the ability to think differently and to become empathic citizens, members of an interdependent world. In other words, to understand that it is important not only to grow economically, but to “grow well”, in a sustainable social and economic perspective. Over competition, cooperation is then essential to achieve more innovative, sustainable, intelligent and global alternatives. A holistic entrepreneurial education, based on values and constructing subjects internal motivation and competencies (with pedagogical strategies adapted to different targets), is essential for this purpose.

Understanding how to disseminate or replicate successful projects and models is central to promote a cooperative sense of development, sharing knowledge and, at the same time, to guarantee the respect for differences and context

specific solutions and stakeholders. Cooperation is thus one of the main foundations of a holistic entrepreneurial education model. To learn with others and to share experiences, from the contexts and the persons are crucial to conceive a global and sustainable development strategy.

The present debate about scaling up models and processes, especially in the areas of health and development, is in fact directly associated with the need to share and to construct together a new vision of the world, an open and sustainable development that could be appropriated adequately by different countries and populations. The increased importance of this debate nowadays is associated with the conscience that the goals, the impacts and the efforts towards poverty and inequalities fight are, not only, unequally shared by all, but also producing different (and sometimes perverse) effects in different contexts. So, the reflection about the “best practices”, “good practices” or “models”¹ replication possibilities and factors is essential.

Under these general assumptions, this article discusses the axes of a scaling up framework for entrepreneurial education projects, identifying its critical variables. The intention is not to explain the (in) success factors and possibilities, but to conceive a way to think about the process, identifying its primary components. In other words, a framework that can help to identify and analyze

¹ Cooley & Kohl (2006, p. 9) distinguish 6 categories of “best practice”: 1. Innovation (minimal objective evidence); 2. Promising practice (based on reports and testimonials); 3. Model (positive evidence in a few cases); 4. Good practice (clear evidence from several settings/ evaluations); 5. Best practices (evidences of impact from multiple settings, meta-analyses, expert reviews); 6. Policy principle (proven in multiple settings; considered widely applicable and essential for success).

the critical links that allow to set up adequate choices, as well as the circumstances that can facilitate or constraint the efficacy and sustainability of the scaling up process.

ENTREPRENEURIAL EDUCATION: CRITICAL ISSUES

Nowadays, the field of entrepreneurship education is spreading not only in universities and management schools, but also in basic educational levels and social organizations. Associated with this movement is the idea, shared by several authors and international organizations (Crijns & Vermeulen, 2007; Cuervo *et al*, 2007; EC, 2005, 2010; WEF, 2009), that entrepreneurship is an important development strategy², by stimulating innovative responses as well as the involvement of citizens in building social and economic alternatives for individual and/or collective problems. Like this, the stimulus to innovation and initiative, to identify and to exploit, in an intelligent and sustainable way, opportunities and scarce resources, as well as the relevance to focus primarily on the strengths and capabilities of the individuals and the communities, are presented, in Europe and abroad, as the operative pillars of a so called “entrepreneurship culture” and entrepreneurial attitude.

Educational models based on new pedagogical strategies are essential for this purpose. In fact, recent research about the impacts of some models of entrepreneurship education indicates clearly that it contributes to risk taking attitudes, to the formation of new businesses (Garavan & O’Cinnelde, 1994) and to the propensity to be self-employed (Charney & Libecap, 2000), especially among students with a positive prior exposure to entrepreneurs experiences (Peterman & Kennedy, 2003). The studies about the effective and persistent impacts of entrepreneurship education and training, the sustainability of actions and projects, their scaling up potentialities and the evidences of social and values change (Sexton & Ksardarda, 1991; McMullan *et al.*, 2001) are however very scarce or superficial.

Pleading the assumption that entrepreneurship (and inherently entrepreneurship education) is mainly an attitude towards life, or, in other words, the translation of the active role that each one must achieve, in a sustainable, complementary and ethical way, either in private or in public contexts, is also to uphold the perspective that entrepreneurship is not merely a skill (EU, Focus Group on Key Competences Report, 2005). This assumption allows then to question the “traditional” methods of entrepreneurship training settled in management standard skills and business

² The European Union Green Paper on Entrepreneurship (EU, 2003) set out a range of benefits that can be associated with entrepreneurship. These benefits include contributing to economic growth by job creation and growth, fostering social and economic cohesion particularly in less developed regions to increase their competitiveness and productivity improvements, unlocking personal potential and satisfying a range of social interests by making wealth, jobs and citizens diversity of choice available.

plans. Concerning these ideas, two main arguments can be forwarded:

1st) the management knowledge is not, *per se*, a predictor of entrepreneurial attitudes or even performance. It is possible to agree that business plans are relevant and that (business or social) entrepreneurs can and should elaborate them. But there are not any evidences that management skills and business plan training creates (more) entrepreneurial people (Ferreira, 2011).

2nd) Entrepreneurship cannot be conceived as a magical solution to structural problems, putting in the individuals shoulders the only key to surpass problems whose causes and consequences are in fact above them. Entrepreneurial education programs that prepare very well skilled individuals must be considered, in this perspective, as only a step to construct effective initiative possibilities to act and to succeed in contemporary societies. To have the skills is not necessarily the same, or enough, to put them in action if the structures of opportunity are not assured. The context of action (including the political, social, economic, cultural and territorial dimensions) is thus very important and must be engaged in a more complex perspective of the entrepreneurial education processes. As Martha Nussbaum (2010, p.9) underlines, by conceiving education programs just oriented by performativity logics “we are addressing just one part of the story of how citizens develop (...). The ability to think well about a wide range of cultures, groups, and nations in the context of a grasp of the global economy and of the history of many national and group interactions is crucial in order to

enable democracies to deal responsibly with the problems we currently face as members of an interdependent world”.

In the sixties and seventies, the functionalist and behaviorist traditions were, especially in the fields of management, human resource development, vocational training and psychological professional orientation, the scientific bases of a narrow skill oriented educational models (Melton, 1994; Mulder, 2007; Sultana, 2009). The determination of “satisfactory performance outcomes” (Jessup, 1991) was, in this perspective, central, focusing on what “individuals should ultimately be able to do” (Melton, 1994, p.286), so, allowing the identification of a set of standardized skills and measurable descriptors. Throughout the 1990s, however, this assumption of skill based education and training originated various and profound critiques (Brown *et al.*, 1994). These critical issues were centered mainly on the inability to understand complex activities and behaviors; to ignore personhood values, professional judgments, group processes and social contexts influences (Barnett, 1994; Hager & Gonczi, 1996), and on the reduction of learning objectives to measurable outcomes in a kind of “mechanical teaching for the test” (Bates, 1995).

Nowadays, the conceptions of competency oriented education tend to be more complex and integrated (Hager & Becket, 1995). It is assumed that the results and processes can be affected either by individual attributes and conditions, or by the influence of different contexts and situations. Like this the entrepreneurial education approach moves away from strictly deterministic behavioral

and skills perspectives and takes in consideration “located” and socio-cultural framed analysis (Brown *et al*, 1989; Hager & Beckett, 1995). Rather than skill standards and outcomes, it must be considered, in this perspective, “broad maps” competencies in contextual territories of education and practice situations (Cooper, 2008). Like this, the strategies of connection and transition

between understanding and experience imply necessarily a complex educational model, based on a humanistic philosophy and in a conception of knowledge that integrates, in a holistic and interdisciplinary manner, knowing, doing and being (Delamare-Le Deist & Winterton, 2005; Sultana, 2009). Like Ferreira (2007) states the entrepreneurship education is (and is not):

Is	Is not
Transversal education for life	Business creation training
Focused on Self	Focused on knowledge
Focused on results	Focused on tasks
Coherent and constant	Sporadic and inconstant
Integrated and multidisciplinary	Disciplinary isolated

To create the possibilities to think and to respond to actual social and economic problems, simultaneously global and local in their scope, it necessarily requires processes of active learning and a critical mind that entrepreneurial education models must guarantee. The understanding that we are part of a heterogeneous world enables to associate a factual thought with complex and dynamic context knowledge. Then, it is possible and essential to overcome a merely localized acquaintance by conceiving the impacts of options and (in) actions in social, personal and economic life. This answerability must include (new) forms of being, behaving, talking, as well as issues such as efficacy, legitimacy, values, connections and responsible power (Wenger, 2009, p.20); in other words, to be able to understand integrated models of social and economic development and to conceive proactive and conscious practices and initiatives.

Education models, namely in the field of entrepreneurship, should thus be settled in practices to produce reflective and empathic citizens, able to exchange ideas in different backgrounds and to produce “livable knowledge, that is, knowledge that is meaningful because it enables new forms of engagement in the world” (Wenger, 2009, p. 20). The intention is then to acquire “a new sense of personal agency and a new critical freedom” (Nussbaum, 2010, p.141), by integrating an ethical dimension (new values focused on positive social responsibility and planet sustainability), a constructivist vision and a cooperative perspective (including the state, the market, the communities and the persons).

In the educational (formal and informal) area, and especially in the field of entrepreneurship education, there are now, around the world, several models being tested (World Economic Forum,

2011). They need however to be effectively shared in a more evaluated, intensive and extensive manner, facilitating a global construction of knowledge and effective partnerships between countries, governments, citizens, organizations, enterprises and learning institutions (holistic “triangle of knowledge”, Strategic Innovation Agenda, European Commission, 2011). Still, this is for the moment a relevant challenge to overcome, implying a more profound reflection about the main analytical and operational axes to consider in a scaling up process.

AXES FOR A SCALING UP ANALYTICAL AND OPERATIONAL FRAMEWORK

The scaling up concept, although largely used in the last decades, has still undefined and non-consensual boundaries. In fact, it is a concept applied to distinct practices and strategies such as the dissemination of a new technique, prototype or innovation process, to the growth of an organization or model, or even, to the transposition of a small-scale initiative into policies or services (Cooley & Kohl, 2006). Thus, it is possible to identify at least three types of scaling up - expansion, replication and collaboration – implying different methods of materialization (figure 1).

Figure 1: Types and Methods of Scaling up

Expansion	Replication	Collaboration
Growth Restructuring or decentralization Franchising Spin-Off	Policy Adoption Grafting Diffusion and Spill over Mass media	Formal partnerships, joint Ventures and strategic Alliances Networks and coalitions

Source: Cooley & Kohl, 2006, p. 11

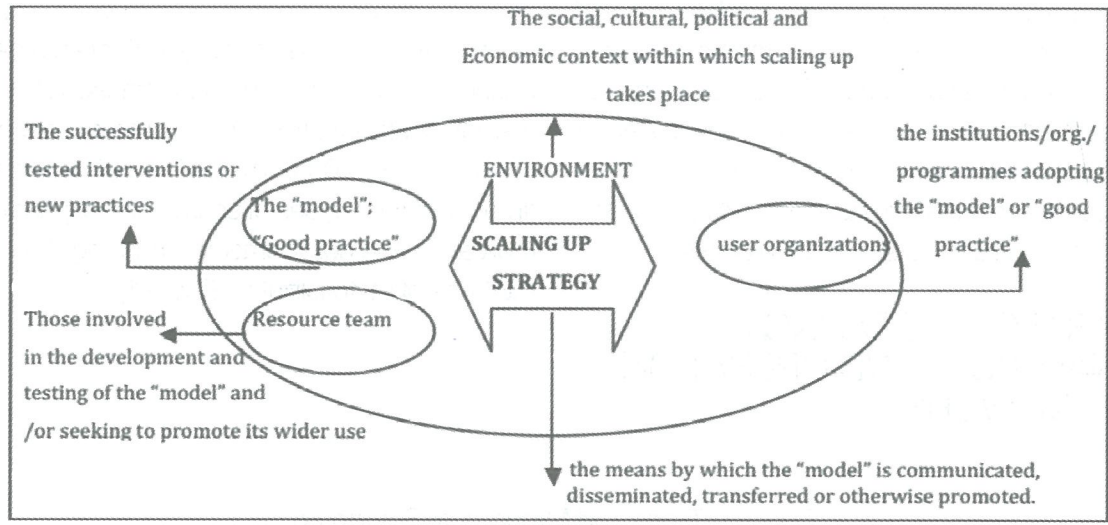
The scaling up expansion type “refers to taking a model to scale by increasing the scope of operations of the organization that originally developed and piloted it”; the replication type is related with the increased use of “a particular process, technology, or model of service delivery by getting others, including the public sector, to take up and implement the model” (Cooley & Kohl, 2006, p. 11). The collaboration type is in the

middle of the expansion and the replication approaches (idem, p. 12).

Like Gilson and Schneider (2010) underline, there is no simple recipe to manage scaling up processes. In fact, several questions associated not only with the characteristics of the product or service to be scaled up, but also with the local context factors, the structures of power and leadership, the political constraints and involvement, the

system-driven and the stakeholders engagement and responsibilities, influence a successful scaling up process and should then be closely considered in its conception and follow-up (figure 2).

Figure 2. The Elements of Scaling up



Source: Simmons, Fajans & Ghiron, 2007, p. 5 (with adaptations).

To scale up a “good practice” or “model” in entrepreneurship education implies thus a reflection and evaluation about its internal and external validity. In other words, it is essential to identify which are the success critical factors, first in a small and localized scale, not only associated with the features and methodologies of the practices to replicate, but also, linked with the contexts and particular circumstances in which it was conceived and applied. Thus, the process of scaling up is inherently the translation of the idea that learning with experience is possible and that a model cannot be applied in different contexts without adaptations.

Based on an open system perspective, every education model, namely the ones concerning entrepreneurship education, are affected by the “outside” world; the contextual forces and influences associated, for instance, with the level of poverty, the bureaucracy level, the specific needs of population, the level of democratic participation and the global influences (Simmons, Fajans & Ghiron, 2007). So, the process of to acquiring scale, in a holistic perspective, is more than practices replication; it is the expansion of opportunities, options, processes and knowledge that can allow people to take the best decisions and to influence their contexts.

Therefore, according to Yamey (2011), there are

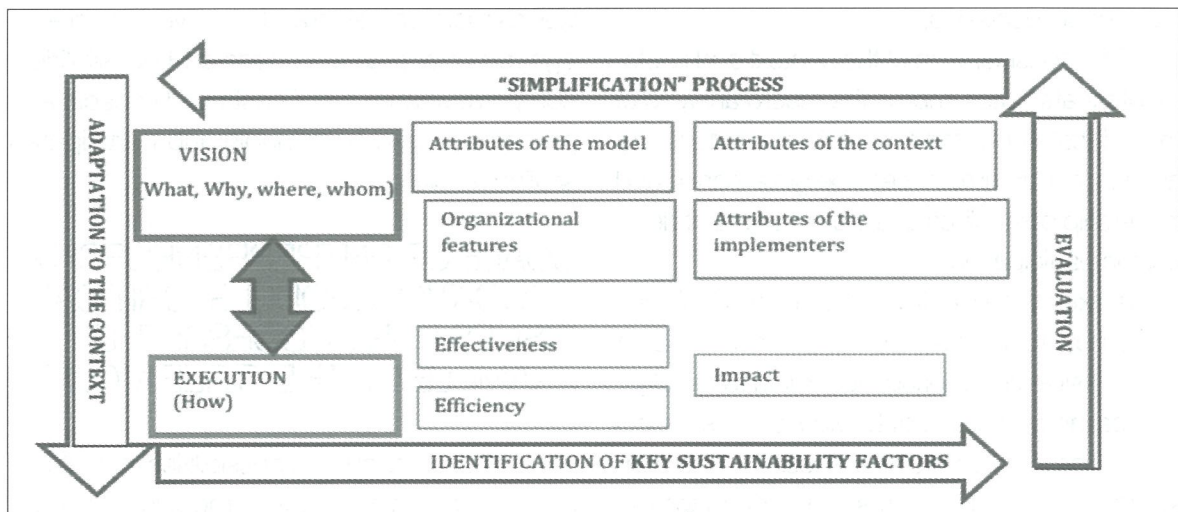
six categories of a scaling up process in which it is important to identify and to analyze its critical key factors: 1. the attributes of a specific model or service to be scaled up; 2. the attributes of implementers; 3. the choice of a delivery strategy; 4. the attributes of the community or group receiver; 5. the social and political context; 6. the context of research and sharing knowledge.

A framework (figure 3) conceived as a way to

think about scaling up processes, identifying their primary components and critical links, could be, in this perspective, structured in two main axes: the vision and the execution.

The **vision** axe frames the definition of what to scale, where and with whom; the **execution** axe engages a set of analytical and operative tasks and choices.

Figure 3. Framework for Analysis of a Scaling up Process



Source: Authors elaboration.

Considering the first axe (**vision**), it is important to reflect about the attributes of the model or practice to be scaled up, the organizational features, the context and the implementers:

a) The attributes of the model or good practice to be scaled up include their goals, concepts, targets, techniques and phases. Reflecting about the criteria to assure the best choices, several au-

thors (Simmons *et al*, 2007; Yamey, 2011) and organisms (World Bank, 2003) have underlined not only the adaptation strategies to new contexts, but also the simplification efforts of the models or practices as predictor success factors of a scaling up process. The simplification “implies an effort to identify in an objective way those elements of an intervention that are essential and cost-ef-

fective for producing the desired results” (Cooley & Kohl, 2006, p. 9). For this, it is crucial to have empirical data to settle the assumptions, an explicit and more “universalistic” model design (concepts, techniques, phases) and a set of minimum key indicators and criteria, clearly defined and well-articulated;

b) The organizational features imply the reflection about the differences and similarities between contexts, resources, capacities and values, in order to take the most effective and sustainable decisions;

c) The consideration of the context and implementers attributes implies the macro analysis of the political, economic and social context, as well as the local circumstances, the governance and leadership possibilities and the dynamics of democratic participation.

The **execution** axe frames strategic decisions about how to scale a model or practice the best way possible considering, according to the classic scaling up stages of David Korten’s model (1990), the factors for effectiveness (how to construct a solution that works), the factors for efficiency (how to deliver the solution at an affordable cost) and the factors for expansion (how to assure a wider impact).

The methods correspond to the strategy definition of how the model or practice can be scaled up in the best way. To choose the best suitable scaling up method, there are some factors to consider, namely: the comprehensiveness of the

model; the capacity of originating organization; the source of financing; the availability of formal evaluation and documentation; the existence of results; the easiness to transfer to other organizations or territories; the quality of governance; the presence of networks and the social homogeneity (Cooley & Kohl, 2006, p. 14)³. Hence, it is particularly important the involvement of local stakeholders and implementers, the use of social networks, personal contacts and informal communication, multi stakeholders partnerships, as well as more operative and effective tasks like diagnosis of population needs and possibilities, comparative analysis of costs and impacts and preparation of a sustainable and participated scaling up plan.

SCALE UP ENTREPRENEURSHIP EDUCATION MODELS. CRITICAL ISSUES FOR SUCCESS: THE EXAMPLE OF THE “TREE MODEL”

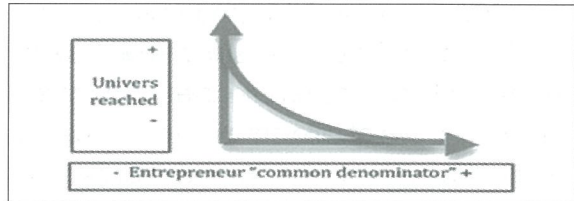
The reflection about the possibilities to scale up entrepreneurship education models must consider three kinds of postulates: 1st) regardless of the type of entrepreneurial initiative and its goals, it is always a human act, so, with a positive or negative, individual or collective impact; 2nd) the mere knowledge of business management techniques is not enough to explain the entrepreneurial phenomenon; an adequate social and psychological profile must be associated; 3th) the

³ See a Scalability Checklist in Cooley & Kohl, 2006, p. 22.

concept of success should not be associated only with the individual production of financial profits. The evaluation of the means and processes to obtain those profits, as well as the consideration of the failures as a relevant learning strategy in the route for success, are very important orientations for the vision definition of the model to scale up. To consider the entrepreneurial education process under these assertions puts in the limelight the need to deepen the research about the entrepreneurial phenomenon, excelling the “creations” and examining thoroughly its creators and the origins of their decisions and attitudes. A scalable entrepreneurship education model, aiming to upstream the most usual training processes in business plans and management techniques, and based on the framework assumptions of simplification and replicable possibilities (figure 4), must search for the basic “building bricks” of an entrepreneurship culture that can be promoted either in schools or other social contexts. In other words, for reflecting about the possibilities to scale up entrepreneurship education models, it is important to identify the “mini-

num entrepreneurial profile” and the pedagogical tools to promote or stimulate it.

Figure 4. Scaling up efficacy axes



Source: Authors elaboration

The development of an entrepreneurial culture is a complex, long and holistic process, depending on many factors inside and outside the person. However, data confirms that the Model that we have been using – The “*Tree Model for the Development of Entrepreneurial Competencies*” (Ferreira, 2011)⁴

- can contribute positively to engage renewed forms of thinking and acting on proximal or enlarged contexts and problems. The data collected allowed the refinement of pedagogical aims and strategies as well as the

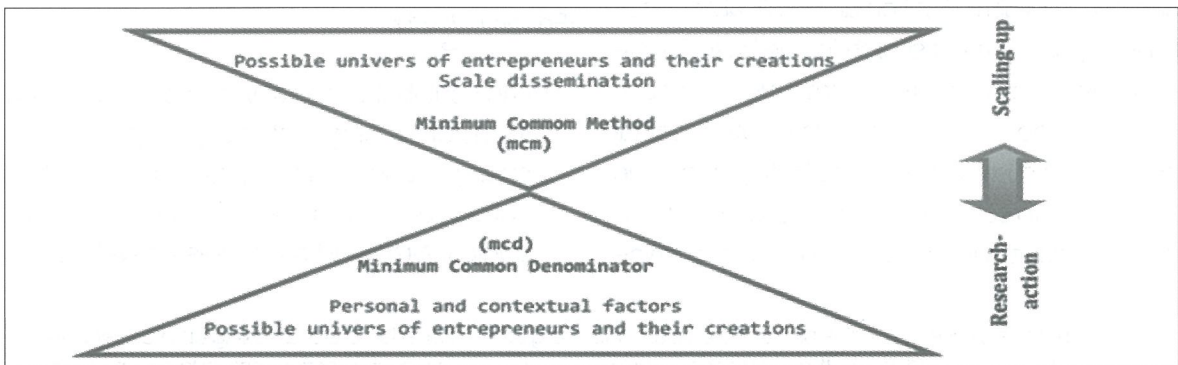
⁴ The assumptions, presented in this part of the article, concerning some critical factors of a scaling up process of entrepreneurship education models, are the result of data analysis, collected by a research-action methodology, in the last 10 years of using the “*Tree Model for the Development of Entrepreneurial Competencies*” (Ferreira, 2011), on several contexts and with distinct target populations. Tree Model Research: Phase 1 - The Entrepreneur (2001- 2005); Phase 2- Development and evaluation (2003-2009). The model was recognized by the Portuguese Ministry of Education (National plan of education for entrepreneurship, 2004-2009) and began to be developed. Example-Data for 2007/2008: Overall 99 schools participated in the Project; 357 pupils projects were developed (148 of social emphasis, 104 scientific/technological and 105 with both characteristics); overall 4153 pupils were involved. Phase 3 – Adaptation to basic school, training of trainers and divulgation (2009-...). Nowadays training of 100 trainers/ annually in the Portuguese Institute of Employment and Professional Training; 800 trainees in the program for immigrants to create businesses, in the Portuguese High Commissioner for Immigration and Inter-Cultural Dialogue and internationalization of the model (Ireland).

construction of evaluation and follow-up instruments that over the last years gave new insights about how to assure the “*simplexification*” (Berthoz, 2009) of the model, actually already replicated in Ireland (*Nurture Tree. A Method for Entrepreneurship Development*)⁵. The main interconnected principles of the model implying the use of differentiated resources are: the development of intrinsic motivations; the training on behavioral competencies (transversal and replicable) and performance competencies (operative and enclosed); the use of interactive learning methods (act to learn); the empirical orientation of activities and the production of real results (not simulated ones) articulated with the self and contextual references and needs of the partici-

pants. The pedagogical model is the “Personal Project” (Ferreira, 2011), a complex method that implies some specialization, technical training and some initial supervision.

The present goal and concern of the trainers is to pin down a minimum profile that could make the model simpler and operational and, at the same time, susceptible to replicate in several and enlarged (figure 4) intervention territories and sectors (schools, businesses, non-profit organizations, social projects, and so on), just by adapting the specific goals and pedagogical strategies to the initiatives size and complexity and to the ages of the receivers group (figure 5).

Figure 5. The “Minimum” Framework for Scaling up Entrepreneurial Education Models



Source: Authors elaboration

The identification of a “*minimum common denominator*” (mcd), allowing to integrate the basic key factors that can influence more an entrepreneurial attitude towards life, is in opposition with

the ideal or idealized entrepreneur profile. In fact, the great majority of entrepreneurial people and the persons that effectively influenced them were not modern specialists on entrepreneurship. This

⁵ South West Mayo Development Company, Newport, Ireland (<http://www.southmayo.com>)

mcd implies hence the identification and training on some transversal elements that can allow the acquisition of a greater personal dynamic background and internal focus of control. Thus, the acquired competencies could be used by different common people in an open manner, to say, considering their context, preferences, needs and resources (personal and environmental ones).

On the other hand, the development of the mcd creates the conditions to conceive a “*minimum common method*” (mcm) to develop entrepreneurial competencies, that is, the creation of simple methods that could be applied, in a lifelong learning perspective, by non-specialists, like teachers, parents, and others. This mcm is not conceived in competition with other methodologies associated, for instance, with business creation and management. On contrary, a simpler and replicable method can potentiate the conditions for more people with increased personal initiative. The implicit assumption is that everybody, independently of their economic or socio-cultural conditions, or age, can assume an entrepreneurial attitude, although only a reduced percentage of them will effectively create businesses.

a) A proposition for a minimum common denominator:

An entrepreneurial action is associated with a certain personal behavior and not mainly with a secure knowledge on management skills; in fact, it

is about the people that use the available resources and not the opposite. Considering this, it is essential to adopt an educational focus on behavior and on the process to achieve results, in alternative to the emphasis on motivation and business features. The behavior and the results are observable by facts and not inferences, so it is possible to reduce the subjectivity on the analysis. The data collected over the last decade experiences on entrepreneurial education show clearly that the three main competencies in the foundations of an entrepreneurial vision of life are, in order of importance, self-confidence, initiative and resilience⁶. These key competences do not transform necessarily someone in an entrepreneurial person, but they are the foundations of an entrepreneurial performance, that is, the absence of these competencies does not allow the development of a consistent entrepreneurial action.

The behavioral competencies are dynamic, this means that they can evolve or recede, considering the environment (motivations, type of stimulus, access to resources, ...). They are also relational because they influence each other. For instance, success initiatives can develop and reinforce self-confidence; on the other hand, a low resilience, understood as the incapacity to resist to pressures (obstacles, reproaches, ...), can affect self-confidence. Thus, self-confidence is the basis of an entrepreneurial behaviour, the initiative is the most distinctive characteristic, because it im-

⁶ The competencies identification and the associated definitions, indicators and case methodology can be consulted in <http://www.iefp.pt/formacao/formadores/formacao/ReferenciaisFormadores/FormacaoContinua/Documents/Competências%20Empreendedoras%20-%202011.pdf>.

plies the materialization of the ideas and motivations, and at last, the resilience is the way by which the entrepreneur adapts himself consistently to reality. These three key competences are associated in a circular relationship and their development affects transversally all activities, independently of the “local” contexts (school, enterprise, social).

Another group of competencies, that can be called development competencies, qualify the entrepreneurial action, giving it, potentially, more value and dimension: the cooperative interpersonal relationships; the innovation and creativity, and the organisation (of extrapersonal resources).

b) A proposition for a minimum common method:

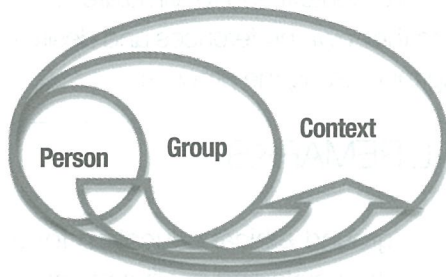
The problem that emerges at this point is about how to transfer this model to an educational practice that could be executed by non-specialists, potentiating its scalability possibilities? That is, a model that could be applied in a large scale and appropriated by educators and pupils in several contexts and translating an ethical vision of the world. At this point, it is important to underline that the intervention is made in open (non-controlled) and holistic contexts. This assumption implies that the educational practices intend to influence the production of a certain result, but not to determine it; in other words, it aims to influence the resolution of “open problems” for which there are not unique answers.

Under this conception, the methodologies and techniques of the “Tree Model” (Ferreira, 2011)

imply a progression from the “root” (diagnosis and competencies training) to the “fruits” (results). However, this process implies very specialised training skills. One of the strategies to encompass some of the model complexity and its training exigences is to invert the process order: from the results to the competencies. By settling the training process firstly in the results, in critical factors of success, it is possible to increase the efficacy of the model and, at the same time, to simplify it. In fact, if it is true that a certain process can produce a result, it is also true that to produce a result a certain process was necessarily involved. By transforming the model in this direction, in a more relativised and local grounded way, it is naturally more difficult to identify the process phases and the strategies used. However, data shows that it is crucial to construct renewed forms of entrepreneurship education models, less homogenised on the processes to assure more equalised development results. That is a challenge also for entrepreneurship trainers; to assume that to produce effective cultural and social change implies to consider, in educational contexts, other tools either than just training modules or courses.

This proposed approach is thus based in critical factors of success associated with three interconnected domains: i) personal; ii) group and iii) context (figure 6).

Figure 6. Critical success factors:
interconnected domains



Source: Authors elaboration

i) **Critical success factors associated to the personal domain:** the first factor is connected with the students responsibility towards the production of results within their projects. In fact, according to the framework that we propose, projects must be conceived to produce real results (not simulations), external to the person and with a focus on context and other people. The implicit educational message is simple: we are all actors, so we have the responsibility and the power to (try to) change ethically the world. After all, to be an entrepreneur is resumed to this basic assumption: the people capacity to modify positively their contexts, either by innovative practices or the development of “good practices” and problems resolution, whether in a school context or in a professional, social (including people, animals and environment) or business ones. Being conceived by students, the intervention proposal is previsibly self-regulated, because it usually reflects the maturity, the qualification, the self-evaluation of capacities, concerns and expectations. Hence, it

is a process that is applicable in all educational contexts, from basic school to adult education.

Another critical success factor is associated with the intrinsic reasons to act. The compensation to produce an intervention project must be associated with the consequent real results and not with an external reward. In an experience conducted by Groves, Sawyers and Moran (as cited in Katz, 2009), in 1987, with pre-scholar children, concerning the idealization fluency (one of the creativity indicators), it was demonstrated that the children integrated in groups with an associated external reward obtained inferior marks in comparison with children integrated in groups without external rewards associated. An important ground educational principle is also implicit in this criticism to external recompenses: the overturn of the action purpose. It is important to guarantee, in a scalable entrepreneurship education model, the defense of the ethical principle that the social and economic resources do not serve merely selfish interests, with very perverse effects for contexts and populations, but common goals in an interdependent world.

ii) **Critical success factors associated to the group domain:** to assure that the construction of the “personal project” is integrated in group methods is the main axe of a minimum common method that allows people to apply relationship and cooperation capacities, putting in perspective their own interests and ideas, looking for a dynamic balance of conceptions and priorities, either by the volunteer adhesion to different ideas, or by the inclusion of distinct perspectives in their

own projet. Hence, it is possible to educate for the understanding of two important axes of an “intelligent development”: the integrated dimension of social and economic life, and the importance of cooperative relationships to increase the value produced by actions.

iii) **Critical success factors associated to the context domain:** the connexion with the educational context and its real environment, with opportunities and problems, is an important pedagogical strategy, allowing, on one hand, the effective application of students social and curricular knowledge, and, on the other hand, the orientation for a more tangible civic intervention. Thus, the real context can be considered as a mediator of the students intentions, contributing to the formulation of change projects. In addition, the students expectations can be modelled critically by the real events and constraints, using the experiential learning to reflect about themselves, the environment and the group cooperation relationships. If we want people able to be active and capable of changing the auto and hetero reality, which could be the best way than to train them by promoting actions in context? According to this, Kearney (2009) refers that when the construction of knowledge happens throught the interaction with the environment, the learning and consequently the behaviours can be more effectively modified throught environment and learning process planned changes. This natural mediation between the real and the imagined must be of course supported and integrated by the educator/ facilitator to assure that it can produce a pos-

itive experience (including error and failure). The main role of the educator is thus to create a personal liberty context and to stimulate students to assume their own preferences and desires, supporting them along the process.

FINAL REMARKS

A strong ground ethical education for a conscious, responsible and intelligent citizenship, combined with strategies to promote key behavioral and functional competencies, are the bases for more active, reflective and innovator citizens and practices. In fact, if the basic pillar of an entrepreneurship attitude is to produce (business or social) value, as well as social and economic change, it is important that students understand more than an amount of standardized skills. It is especially important that they reflect critically about their role and actions impact in their life context and in the world.

This is the structural assumption of an analytical framework for a scalable entrepreneurship education model. In other words, considering that to have structured entrepreneurship courses or formation skills modules is not enough (and even potentially perverse) to promote intelligent development and effective entrepreneurial results (active and responsible citizenship), if the contextual structure of opportunities is not simultaneously taken in consideration and transformed, a critical scaling up framework must engage necessarily pedagogical strategies, adapted to local circumstances and target populations, but also, multi lo-

cal stakeholders and resources partnerships and connections.

Hence, the main global critical success factors are, as argued, the consideration of the students and the group interests and motivations, promoting actions that intend to modify, directly and

visibly the environment, as well as the implication of the local context, politics, agents (political, economic, territorial, cultural) and resources when defining the vision and the execution axes of the model to be scaled up.

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