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The Making of a Revolution in Brazil: The Introduction of Entrepreneurial Pedagogy in the Early Stages of Education

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ABSTRACT:

The Entrepreneurial Pedagogy Methodology (EPM) is a pedagogical approach designed to support entrepreneurial learning in elementary education. Based on systems and visionary thinking, EPM was developed to support the learning of thinking and acting processes geared towards entrepreneurial expression. The program incorporates tailor-made resource materials. EPM was pilot-tested in 2002. In 2003 and 2004, 6,352 teachers and 173,304 students enthusiastically participated in the program in 1,566 elementary schools in the state of Paraná, Brazil. A total of 340,000 students throughout Brazil were involved in the project in 123 cities over the two-year period. This chapter presents the content and application results of EPM and discusses the program's importance for the blossoming of entrepreneurial spirit and action. It describes and discusses the Paraná project. It looks at entrepreneurship education through the lens of self-identity, democracy, cooperation and learning, all elements considered the building blocks of development.

Keywords: education, entrepreneurial education, elementary education, entrepreneurship education, pedagogy, entrepreneurial pedagogy, learning, entrepreneurial learning, dream, entrepreneurial dream, development.

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Introduction

Entrepreneurship development is often regarded as something that can be achieved mainly through the introduction of policies to stimulate and structure new venture creation. This chapter, however, suggests that one of the most powerful means of developing entrepreneurship in a society is through educational programs that incorporate entrepreneurial thinking at every level of the educational system, starting with elementary school. Entrepreneurship is regarded here as a culture that is expressed through a particular type of thinking and action. We suggest that this type of thinking requires the development of faculties using the resources of the right side of the brain (imaginative and intuitive thinking). This can be achieved by means of exercises in which subjects learn how to dream and then transform their dreams into reality by defining and then implementing entrepreneurial projects.

A pedagogical methodology known as Entrepreneurial Pedagogy Methodology (EPM) was designed and implemented at elementary schools with a view to facilitating entrepreneurial learning at a young age. The methodology is based on a sequential dream initiation structure. The premise behind it is that the education system is focused too heavily on the transfer of knowledge and not focused enough on the learning of independent imaginative thinking methods. The text shows that, based on the Brazilian experience, entrepreneurial learning can start at a very young age, provided people are trained to think in terms of defining dreams or contexts. This particular approach was designed as a radical change to the traditional educational methods used in schools, which tend to concentrate on knowledge transfer rather than learning how to think independently and proactively.

An experiment such as this involves changing the existing culture by creating well-structured interactions between the components of a social system that do not usually interact – for example, teachers, economic development officers and municipal political leaders. The text presented here describes a different way of designing and practising education, along with a new way of organizing its implementation. Within this method, teachers are called upon to play a new role, that of catalyst and facilitator whose job is to help the students to learn a new way of thinking. Instead of simply transferring content, they must now help their students to learn how to think in entrepreneurial terms.

The need for revolutionary learning approaches to change the social order

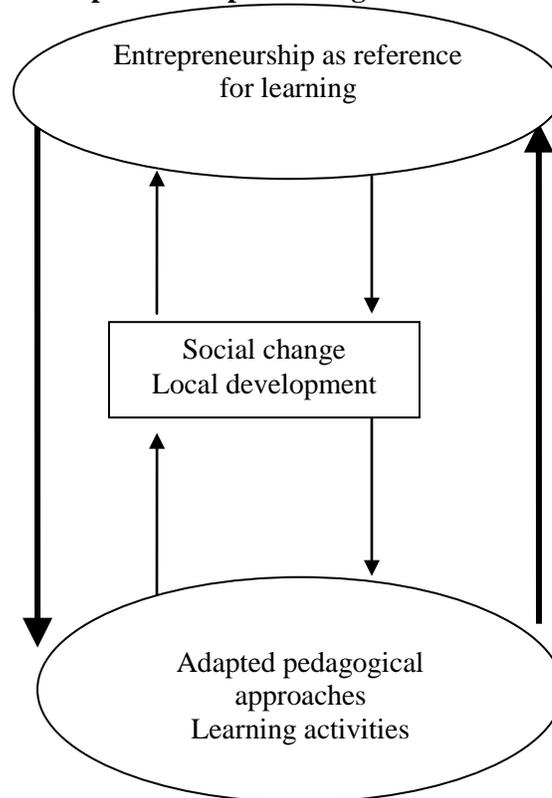
If society is to change, we must put in place revolutionary—and even radical—approaches that allow change to happen. From an entrepreneurship perspective, change should come from the bottom, not the top. But first, structural changes that will generate the desired entrepreneurial changes must be integrated in the social system. Entrepreneurship offers fresh perspectives for modifying existing learning patterns and processes. It reveals a secret as old as civilization itself: the capacity of human beings to be the protagonists of their own destinies is becoming accessible to all, within both less developed societies and organized, sophisticated social structures. Anyone can act intentionally to alter their relationships with the world and with others and to continuously recreate themselves.

Mass education, which has existed since the 1800s, has really been made widely free and available only in the last 50 years. Entrepreneurship appears to be something accessible to the masses, who previously had little exposure to how to acquire the tools to become self-sufficient and even prosperous. The learning patterns and processes of entrepreneurship are now attracting the attention of specialists from many fields: economists, psychologists, sociologists, engineers, management scientists, strategists—and educators (Béchar and Grégoire, 2005).

Entrepreneurship is a craft that can be learned (Fayolle, 1999, 2003, 2004; Fillion, 2004) and its development in a society can be supported (Kao, Kao and Kao, 2002 and 2004; Lundström and Stevenson, 2005; Van der Horst, King-Kauanui and Duffy, 2005). It has often been seen as an isolated and individualistic activity, but Julien (2005) showed that entrepreneurship is also a social phenomenon and that its blossoming reflects the social values, cultures and dynamics from which entrepreneurs emerge. This view of entrepreneurship has contributed insights about how to instil learning that helps young students acquire skills that can free them from existing cultural patterns and social structures, particularly in developing countries. They will be able to break the chains of new forms of slavery and dependence on the existing social order and become free agents of their own destiny.

This is the revolutionary approach to the pedagogy of development put forward in opposition to the pedagogy of the status quo. The pedagogy of the status quo exists to reinforce the social order. It socializes students to accept the social roles into which they were born and offers little or no hope for the poor, the uneducated and the less educated, who will become part of the machinery that keeps society as it is. Figure 1 illustrates the dynamic between learning that implies the logic of entrepreneurship, the selection of appropriate pedagogical approaches, and the impact generated on social change and local development.

Figure 1
Entrepreneurship Learning and Radical Change



Entrepreneurship as a human activity system

Classical economic theory regards the entrepreneur—along with other “imponderables” like the climate, government, politics, plagues and wars—as an “external force” (Shane, 2002 a and b). The entrepreneur has come to be seen as playing a major role in economic development.

This is especially true since Joseph Alois Schumpeter (1883–1950), revisiting the ideas of Jean-Baptiste Say (1767–1832), turned the focus to the tripod of “entrepreneur, innovation and economic growth” (Schumpeter, 1934). Say (1803; 1996), born a century after Richard Cantillon (1680–1734), is considered Schumpeter’s precursor and the pioneer of entrepreneurship in economic history (Filion, 1998). While Cantillon (1755) associated the entrepreneur with risk taking, Say was the first to distinguish between entrepreneurs and capitalists: he linked entrepreneurs with innovation and saw them as agents of change. They were individuals who could get better results using fewer resources. However, it was Schumpeter who in fact launched the field of entrepreneurship. He clearly associated entrepreneurship with innovation and made it known through the publication of his works in English.

A key element of innovation lies in perceiving and seizing opportunities (Sexton and Smilor, 1997; Filion, 1998; Filion and Dolabela, 2000, 2002; Shane, 2003 and 2005). Timmons defined the entrepreneur as “someone able to identify, seize and take advantage of opportunities, searching for and managing resources so as to transform opportunities into successful businesses” (Timmons, 2004; see also Shane, 2005).

Filion (1991a and b) looked at entrepreneurs from a systems thinking perspective (Checkland, 1999). He tried to map how entrepreneurs think in order to do what they do. After studying dozens of entrepreneurs through fieldwork interviewing, he was struck by the fact that in designing their activity systems, they do more projective thinking and anticipatory learning than other organizational actors. There is a close

relationship between what entrepreneurs plan to do and how they identify the learning required to do it. They tend to design and structure organizational activities in an organic and adaptive way by following less than other organizational actors the “known existing rules” about organization management (Filion, 1988). They dream and vision.

Thus, Filion defined an entrepreneur as “someone who imagines, develops and realizes visions” (Filion, 1991a and b). Theories about conceptualization in entrepreneurship differ, generally according to the perspective and discipline of the theoretical approach. Yet most who study the field do so to learn about those who generate an added value (Bruyat and Julien, 2001), very often by creating an enterprise or by contributing to the renewal of an existing organization. An entrepreneur can thus be seen as an individual “who defines contexts.” It was from this reference point that we began to look at designing learning approaches to prepare students to think in ways that would allow them to design new contexts (Filion, 1989).

From that systems perspective, Dolabela (1999, 2003a and b, 2004) wrote books about proactive learning approaches to designing pedagogical methodologies and activities that support the education of entrepreneurs. These approaches to entrepreneurial pedagogy (EP) associate the concept of entrepreneur with a state of being—a lifestyle, a world view, a way of thinking, an orientation towards innovation and a capacity to produce changes in oneself, the environment, and the means and forms of seeking self-realization, including reaction patterns to ambiguities and uncertainties (Dolabela, 2000a).

Dreams as the basis for entrepreneurship activities and learning

We thus essentially saw entrepreneurs as individuals who are able to dream and able to organize themselves to make their dreams come true. The approach we are proposing includes three categories of dreams. The first, the collective dream (CD), is the dream that the society, or parts of the society, forms implicitly or explicitly about its future. The second, the structuring dream (SD), has the capacity to give birth to a life project; the realization of individual SDs will lead to the realization of the CD. The third, the activity dream (AD), allows the entrepreneur to conceive of and structure projects that will produce the SD.

This concept of dream applies to all human beings, but especially to children. They are learning to learn, and to think about the world and about themselves. The concept concerns potential entrepreneurs of all kinds, categories and types—those who contribute innovations to enterprises, government, the tertiary sector and non-profit organizations as employees, managers, autonomous professionals and business owners. Dreams imply projective thinking that allows people to become better organized, identify more clearly what they need to learn and increase their level of self-efficiency.

Collective dreams

Collective dreams are the basis from which entrepreneurship is expressed, and they include society’s values and expectations. In his research (1961) on the role of heroes in history, David McClelland demonstrated that the CDs that were formed after these heroes appeared in the literature greatly influenced how the generations that followed expressed the need for achievement and power. Structuring dreams were imagined and structured that led to the making of more entrepreneurial, developed and prosperous societies.

Like present-day movie stars, heroes inspire young people’s behaviour and choice of career. Magazines, newspapers and best-sellers express collective dreams daily through the types of heroes they project and value. But CDs can also be made more explicit by having people in a society specify the types of leaders they want to produce. These types can then be presented as models. For instance, in many societies

entrepreneurs have received a multiplicity of awards, and this has helped show that entrepreneurship can be a career valued by society.

We can go a step further. In the late 1990s, Quebec passed a law making it compulsory for every elementary and secondary school to organize a school council of student, teacher and community representatives who decide the type of community they want to become, the subjects that should be studied in the school and so on. The council chooses the main topic for its school: music, art, entrepreneurship or certain crafts, for example. It has been suggested that, as it is small businesses that create the majority of new jobs, the councils should pay particular attention to the types of small businesses that exist in their communities, so as to better prepare the kind of manpower required by the organizations that are actually going to recruit and hire people (Filion, 2005).

All CDs in today's world should integrate entrepreneurial components. Enterprises throughout the world need more highly developed entrepreneurial behaviours, and all societies need more entrepreneurs (Filion, 2005). Entrepreneurship is a form of leadership; entrepreneurship-related learning implies the learning of leadership life skills that are essential for the organizations of the future (Roberts, 2004). All societies need to generate more entrepreneurial behaviour and more people who create and can share the wealth. These people are commonly called intrapreneurs and entrepreneurs.

Structuring dreams

Collective dreams will be realized through individual SDs and ADs. A structuring dream is a dream one dreams about one's own future. It leads to self-realization. A structuring dream should answer the questions, "What is your dream in life?"; "What would you like to achieve?" It is the one dream that makes the eyes sparkle when one talks about it.

Anyone, regardless of circumstances, has the capacity to formulate dreams: this is an attribute of human nature. Within the realm of EP, dreams that are not classified as entrepreneurship-related are seen as "peripheral dreams" (PD). This means that these other dreams, be they single or multiple, do not have potential to be the foundation of a life project or entrepreneurial activities and to lead in a structured way to self-realization.

Dreams that lack emotional content lack sufficient energy to drive the dreamer into action and are not considered SDs or ADs. Dreams bear a structuring character only when they boast the energy necessary to drive the dreamer into an involvement that leads to action about self-realization. Experiencing the emotion of the dream thus transports the individual into a state where the way of seeing and feeling about the world and perceiving one's own abilities is transformed into a drive for action.

A few words must be said on the different types of dreams. Depending on the perspective, typologies of structuring dreams and activity dreams have several different configurations. We have kept three: overachievement (OA), coherence (C) and underachievement (UA). These three types apply to all categories of dreams: CDs, SDs and ADs. In the OA dream, children express SDs and ADs with overly ambitious targets that are difficult, and usually impossible to reach. In a C dream, children express SDs and ADs that are achievable and coherent with what they are capable of accomplishing. In the third type, the UA dream, children express SDs and ADs that are below—and sometimes far below—their potential.

When first conceived, most SDs may appear embryonic. They may seem abstract; they may contain nothing that can be applied as is or that can be translated immediately into a plan of action. Generally, the dreams first manifest in modes of social interaction: contributing to social justice, the elimination of poverty, the dissemination of knowledge or the improvement of living conditions. SDs address ways of earning a living, achieving independence, mapping out one's destiny, providing a better future for one's family, making oneself respectable and so on. We have observed that children implicitly develop SDs

through which they can express their natural abilities and in areas that are part of their evoked systems (ES). These are areas with which they are somewhat familiar—they have developed a mental image because they have been exposed to the area through personal contact, reading, education or the media.

Activity dreams

SDs are realized through the design and implementation of ADs. ADs are entrepreneurial projects. The kind of abstraction expressed in an SD depends on the dreamer and the dreamer’s stage of life. A 6-year-old child, for instance, tends to formulate more ADs than SDs: children at that age focus on concrete dreams such as a certain toy. If an SD is to materialize for an adult, however, it must first become an AD that can be achieved through a plan of action. Most SDs will be realized through ADs that are entrepreneurial ideas.

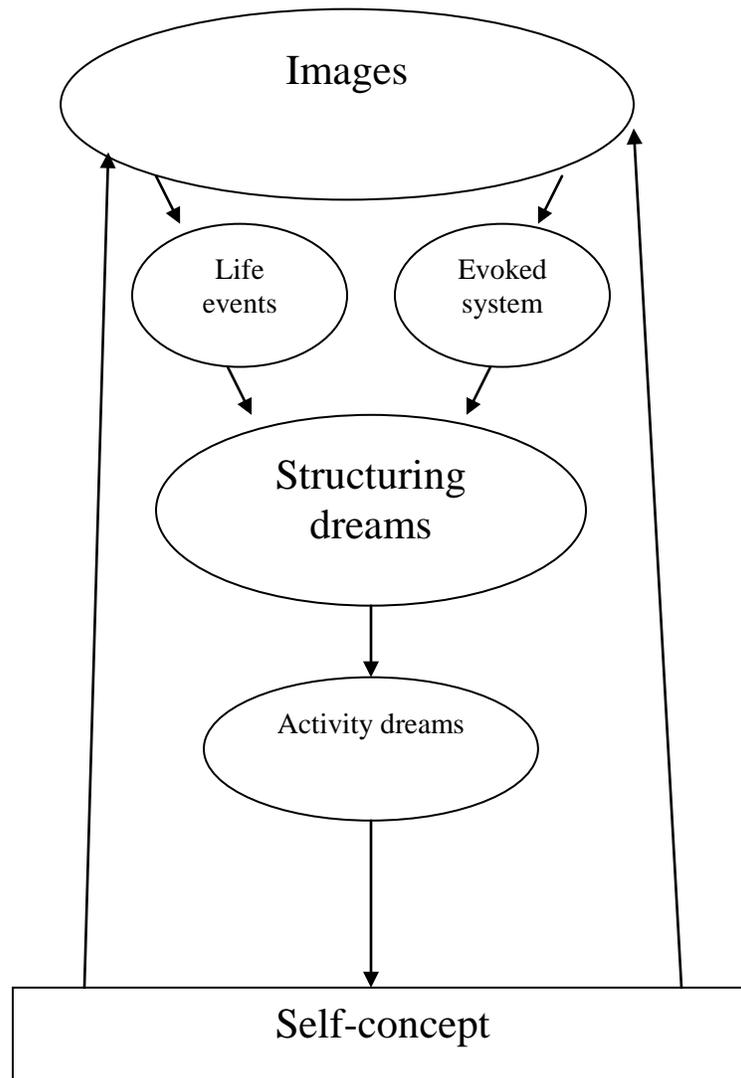
The imagery (Block, 1981) that derives from dreams is neither static nor permanent. In fact, the imagery produced by following one’s ES and life events becomes stimuli for both new SDs and ADs yet to be designed. SDs are strongly induced by value systems, including models and social roles. ADs are influenced by the same factors, and especially by expertise expressed around children. They are designed taking into account contingencies, circumstances, abilities, competencies, knowledge and behaviours. ADs will be used to plan activities. When children grow up and become experienced adults, they will be able to formulate visions of the space they can occupy in the marketplace and the organizational systems they need to help them get there (Filion, 1991 a and b). The dreaming process they have learned will serve as a useful background to help them vision in a more precise and organized way. Table 1 provides examples of each kind of dream.

Table 1
Examples of Dreams

Collective Dreams (CDs)	Structuring Dreams (SDs)	Activity Dreams (ADs)
To improve health conditions	To become a doctor To develop a new kind of hospital	To study medicine To build a hospital
To preserve animal life	To become a wildlife specialist	To create an NGO to take care of wild animals
To improve the living conditions of the poor, and especially to improve housing for the millions living in favelas	To become an architect To become a politician	To set up a business that builds houses for the poor To create laws for the financing of low-income housing

The children who become involved in the learning process discussed in this chapter constantly build and rebuild their SDs and ADs as they themselves change and evolve. Their reference group also plays an important role in the evolution of the SDs and ADs. SDs may be transitory, as they are influenced and determined by the changes in the self and the changes brought to the ES. There is a continuous dynamic between the dreamer and the dream and, among children, especially between the dreamer and the SD. As long as it endures, or until it is replaced or metamorphoses into another dream, the SD provides a meaning, a purpose and a motivation, and influences the formation of identity in youth. Figure 2 illustrates this dynamic.

Figure 2
Structuring Dreams and the Formation of Identity

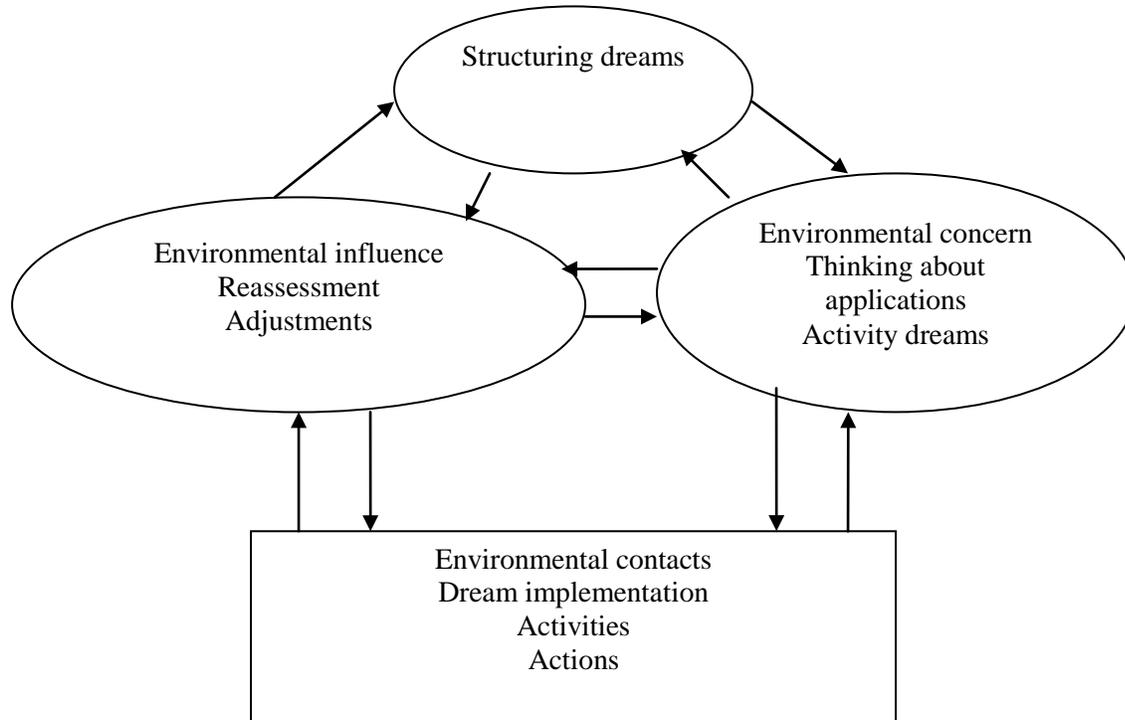


Only the dreamer can distinguish between PDs, SDs and ADs. The dreamer does this by assessing the intensity of the emotion that the dream produces. An SD tends to persist and to endow itself with the load of emotions necessary for its realization. In attempting to realize a dream, the individual continuously makes adjustments between the perception of the self and the capacity to realize SDs and ADs, and between self-knowledge and the potential for realization of an SD.

The social roles and models that surround the child, and the level of self-esteem that these generate, are key determinants in the self-concept that forms (Filion, 1999). In seeking to realize the SDs and ADs, the individual acts, makes mistakes, reassesses, transforms the self, transforms the SDs and ADs, and acts again. The individual follows a self-creative dynamic motion that implies a continuous creation of the self through a constant interchange of components that characterize living beings—and especially young ones—in the making of what they will become. The type of relationship the individual maintains with the environment considerably influences that process. This is where entrepreneurial education can make a difference.

By establishing a relationship of reciprocity with the environment, the individual designs the ideal self he or she wishes to become. In this way, the individual can absorb, in an idiosyncratic manner, the environmental disturbances that necessitate continuous adaptation and readaptation efforts to re-establish the balance. This is constantly repeated in the cycle “dreaming SDs and ADs and seeking their realization,” in which the individual initiates a relationship with the environment. Entrepreneurs continuously cut and polish compatibilities with their ego, the self-realization model represented by the SDs and the environment in which they perform their activities. Figure 3 expresses this.

Figure 3
Cycles of Design and Redesign of Structuring and Activity Dreams



Collective dreams as inspiration for individual dreams

Dreams are expressed within a social context. If the social structure of a society is to be changed, changes have to be brought to the social environment that influences the imagery from which CDs, SDs and ADs are derived. But how do dreams arise anyway? Leaving aside the psychological aspects of dreams (Fishbein, 1981; Freud, 1955; Winget and Kramer, 1979), we will look instead to sociological dimensions related to SDs and ADs (McClelland, 1961; Piaget, 1962; Richardson, 1969; Segal, Huba and Singer, 1980; Singer, 1973 and 1981; Singer and Pope, 1978) and especially to the projective effects on the future of the life structure that follows projective thinking and dreaming (Feather, 1982; Gollwitzer, 1999; Klinger & Cox, 2004; Oettingen, Pak & Schneller, 2001; Rabin, 1981; Semeonoff, 1976; Schmuck & Sheldon, 2001; Snyder, 1994; Wong & Fry, 1998).

The nature of the individual dream is strongly determined by the values of the culture to which the dreamer belongs. Why is this so? Human beings are social products. Individual dreams are referenced to the individual's social context. Imbued with cultural values, each individual produces dreams according to a particular representation of the world, the individual's own history, the processes of construction of the self, and the relationships established with others and with the world.

If the dream is determined by culture, and our goal is to appropriate the educational process to establish a foundation for entrepreneurial and ethical values that were absent from the individual's environment and that still may not feature in the society where the individual evolved, relevant new values and culture must be conveyed. This can be done by introducing new types of social models. This is a straightforward application of McClelland's findings (1961) on the influence of heroes in the literature.

This process can also be achieved by other means, including educational programs that present the desired values and social behaviour. The desired values could be love and cooperation. The activities shown would always have the common good of the community in mind, thus promoting an improved quality of life and greater freedom for everyone—with all that means in societies that experience violence daily. The educational program could focus on activities that generate more evenly distributed income, wealth, knowledge and power. As society is the source of individual dreams, it can be said that the implicit social models behind the learning and the identification process of children will lead to the reproduction of the status quo. Beings tend to reproduce what they see, what they know and what they are taught to value. Education can present models that will influence change in the social order if those social models are appealing enough to influence the SDs of young students and powerful enough to influence new types of aspirations for their future.

Here are some of the questions we can ask: Are the social models presented in a given society by the media desirable for children? Should these models be used in education? If not, what alternatives would support a sane and promising CD and SD for young children? Here, collective dreaming becomes a means of helping educators, parents, children and representatives from society concerned with education to design the desired educational programs that will prepare young children for the society of the future—for the type of entrepreneurial society we wish to see happening in the future (Dolabela, 2003a; Fillion, 2005).

If, however, only a small part of society looks at education in this way, other members of society could perceive that small group as a threat. "A community that dreams and is comprised of individuals whose dream is to realize the community's dream is a threat to those who try to perpetuate the structure of power and prevent changes. It is for this reason that dreaming can be dangerous." Dolabela, 2003b).

Focus on entrepreneurship oriented towards value-added contributions to society

However individual in its conception, an SD implies collective dimensions in its purpose: it should add value to, rather than take value from, the community. And even though it is individual in its conception, the dream is strongly influenced by the values of the community to which the dreamer belongs. Moreover, the SD will bear collective dimensions in its implementation, as it will become the fruit of the cooperation of the various players, resources and support elements that make it happen.

From that perspective, the practice of entrepreneurship that is to be supported by societal support systems, such as education, should include collective values. It should contribute to the quality of life of a society, and generate more than economic activity and individual profit. In relation to this social contribution, we can identify four types of entrepreneurs, which are introduced in Table 2.

Table 2
Types of Entrepreneurs and Social Contribution

Values	Type of Entrepreneur	Social Contribution
Egocentric	Destructive	Negative
Egoistic	Static	Neutral
Individualistic	Efficient	Positive
Collectivist	Humanitarian	Positive

Educators need to focus on the types of entrepreneurship that carry both individualistic and collectivist values. The emphasis in entrepreneurship is on the capacity to identify and seize opportunities in one's field of work, but these opportunities should generate an added value for society in the form of knowledge, well-being, freedom, health, democracy, material wealth, spiritual enrichment, improved quality of life and so on. These are the values on which the proposed Entrepreneurial Pedagogy Methodology focuses. Entrepreneurial education should make explicit a will to contribute socially. It should focus on the humanitarian type of entrepreneur—in both non-profit and for-profit businesses—more than it has in the past. Many entrepreneurs who made fortunes can be classified as individualistic, but they also contributed an added value to the quality of life in society: Henry Ford, Ichiro Honda and Bill Gates are examples.

CDs may be defined as the desired images members of a society envision for the future of their community, images formed by the convergence of the multiple and diverse images held by the society's individual members. CDs should be associated with specific projects that can be transformed into reality through the dynamic interaction of the human, social and natural potential of the society itself. As the source, nourishment and framework of many individual dreams, CDs offer a reference that inspires individual SDs. These SDs will be shaped taking into account the resources and support available. Individual SDs should overlap and comply with what is socially acceptable, what was defined implicitly or explicitly through social consensus. Contrary to what many think, entrepreneurship is rarely an isolated act. It follows a set of social structures and values, which is why some types of entrepreneurship are expressed in certain societies and ethnic groups more than others.

The defining of collective dreams has implications. Organized societies often define their collective dreams—the type of society they desire—through political parties. But CDs can also be defined locally through the education program of each school. Certain conditions and implications of CDs will affect both those now living in the society and those yet to come: how the society is organized, the social structures that result, the types of interpersonal relationships that develop, the types of dialogue that emerge to establish cooperation between the various social actors, and the capacity to resolve conflicts democratically and stimulate the expression of values and emotions that allow higher levels of self-actualization.

Enriched by social diversity in all its forms, by alternatives for social involvement and by an abundance of technological options, CDs should inspire and create the conditions for greater humanity and a richer multiplicity of individual SDs. CDs that are founded on the principles of freedom and acceptance of others and on a process of negotiation towards social consensus about constructing the future will more likely inspire entrepreneurs inclined to design SDs that promote social welfare. Societies that have contributed and developed knowledge about themselves and the world, that have stimulated collective manifestations of emotions and dreams, humour and adventure, beliefs and hopes, and that, by respecting their past, are prepared to reinvent the future and construct the new, will be more appealing for individual SDs that wish to improve the collectivity. The future seems to lie with societies where institutional structures allow negotiation towards social consensus.

Entrepreneurial pedagogy: A key approach to support development

Designed to support social development and social inclusion, entrepreneurial pedagogy begins by constructing a CD. This CD implies a collectivist approach in defining a future for that society.

The school as a representation and a microcosm of the society

By using the existing public and private school systems in its implementation strategy, entrepreneurial pedagogy values the school for its role as a representation of the community. Schools are understood to be the locus for acquiring a capacity to deal with and construct the future. In this sense, the school

represents a microcosm of society that can help forecast what the future holds for a given community. One of the characteristics of EP is that the community must actively participate as both a learner and a supporter. The community is the source of education and it sets educational objectives; it determines the uses that can be made of education.

The CD process of constructing a community's future requires projective thinking about scenarios that are often far removed from that society's existing models and structures. This is particularly true in developing societies like Brazil. For this reason, it is critical that the members of the community develop a reflective relationship about a probable and desirable future for their reality. Entrepreneurial pedagogy offers an environment for CDs related to the collective design of ways of living, being and working that imply new forms of knowledge. The first level of concern is education that will prepare for life, rather than for a specific job or occupation.

Gradual progression in forming new identities

The learning environment that results should nurture and develop the learner's confidence and self-esteem. It should immerse the student in a learning system where there is a coherent relationship between the learner and the world. A meaningful education should take into account the learner's cognitive, emotional and social background.

The evolution of children in forming new identities must be gradual and coherent with their past, and there should be no drastic rejection of their past. There are nuances here. Forming new identities in a gradual manner is essential to reducing the tensions between the learners and the world around them. The knowledge the children acquire will help them design and implement individual SDs; it will stimulate them to express creative powers as their level of self-confidence increases.

Cultural roots: Methodology conditioning factors

Designing a country's development agenda affects not only the role of entrepreneurs, but also the roles of most other players in the society: everyone will be expected to adopt a level of entrepreneurial behaviour. Brazil is in great need of entrepreneurial education to allow a higher proportion of its human capital to express their entrepreneurial potential. Otherwise, large segments of society will continue to be denied the opportunity to generate income and experience the fulfillment of self-actualization. While it is interesting and useful to look to the experiences of countries with higher income levels, more equitable distribution, welfare, democracy and freedom of entrepreneurial expression, these experiences and social models cannot be applied in Brazil as such. Brazilian society, like every society, has unique specificities, diversities, regionalisms and complexities that must be recognized and respected. The Brazilian social and cultural fabric is creative due to its diversity, but unevenly developed because of its history. It is open to new approaches to reach better levels of development and offers a fertile ground for EP and for its application in the basic¹ education system.

There are other conditioning factors. We must consider the Brazilian education system. Historically, the education system has often been threatened by ideological and political polarization, a lack of democratic practice and community participation, and a process that undervalues teachers. Teachers, parents and communities have never participated in the system to any degree or been involved in defining learning needs; in that respect EP is breaking new ground. To these factors, we can add a lack of knowledge of and prejudices about entrepreneurship, and little awareness of the importance of entrepreneurship and

¹ What is known as "basic education" in Brazil consists of the following: pre-school (three grades, 4 to 6 years of age); primary education (8 or 9 grades, 7 to 14 years of age); secondary education (three grades, 15 to 17 years of age).

entrepreneurial education and of what they may contribute to individuals and development. Entrepreneurship is often seen in a negative light, entrepreneurs portrayed as exploitative and unethical.

Ethics must be taken into account. As a pedagogy focused on development, EP associates the results of applying individual dreams primarily with social and human values that will improve the community's standard of living. Our interest lies in entrepreneurship approaches that both produce income and distribute the wealth generated by the entrepreneurial activities. EP must lead to more than entrepreneurial expression: it must also support cooperation, democracy and humanity. The implementation of individual dreams should improve the community's quality of life. The implementation of individual dreams must be done in a way that enhances a society's moral and ethical values.

The Entrepreneurial Pedagogy Methodology (EPM)

The Entrepreneurial Pedagogy Methodology (EPM) was designed for elementary education to develop in youth a more fertile ground for creative and entrepreneurial expression. EPM presents the students with a learning plan that has two objectives that are the basis of the approach: the formulation of dreams and the implementation of these dreams. They are expressed in six steps as illustrated in Figure 4. The program, a class of two hours a week for 40 weeks a year, should be part of the students' curriculum from the beginning to the end of elementary school. It can be extended to secondary education using the same principles and, in some schools, might even begin with nursery school or pre-school activities. Thus, it can begin at age four and be applied every year up to the last year of secondary education, when the children reach 16 or 17 years of age.

The pedagogical task each school year consists of the "dreaming dreams and seeking their realization" cycle. The year begins with the question, "What is your dream and how will you make it happen?" At the end of each school term, the students give individual presentations somewhat as follows: "Here's what I've done to formulate my dream. Here's how I structured it, and this is what I've done to realize it. Here's what I achieved and what I still need to do to make it happen. Here are the problems I encountered and the lessons I learned that will make it easier next time."

A classroom application

In August 2002 a pilot test of the Entrepreneurial Pedagogy Methodology was carried out in the municipal school Israel Pinheiro in the slum Loud Vera Cruz. The teacher, Adriana Moura, began the class by asking the students two questions: "What is your dream?" and "What will you do to make it happen?" (Two very basic questions almost never asked in Brazil either in the schools or by most parents, apart from the "social" question, "What do you want to become when you grow up?" that adults ask when they meet a child.)

"I want to traffic drugs," responded one 15-year-old, "because my mother is starving." The student wanted to be what in Brazil is known as an "airplane"—the person who provides the "merchandise" to the customer. This seemed to be the only activity he could envision as a way of making money to help feed his mother and the other children.

One can imagine how a teacher might react in a regular class—she might consider it an act of delinquency, or she might offer to help the mother. And it is likely she would then continue explaining, for example, how to extract a square root....

However, the incident took place in the entrepreneurial class—the "class of dreams" as the students nicknamed it from the beginning—and two things happened.

First, as trafficking drugs was one student's dream, it had to be discussed, commented on and discarded as a possibility by the teacher. Second, the boy's classmates then "entered" his dream. They opened the discussion and made suggestions: if the problem was a plate of food, he must think of another way to get it. And they found one. They decided to create a company that produced cleaning products. Together, they developed a logo, a folder and six products, for which the science teacher suggested formulas, and "Tá limpo" ("Very clean") was born. The student had an alternative to entering the drug world, and his mother and younger brothers and sisters had a means of feeding themselves.

The language and process of the proposed Entrepreneurial Pedagogy Methodology (EPM)

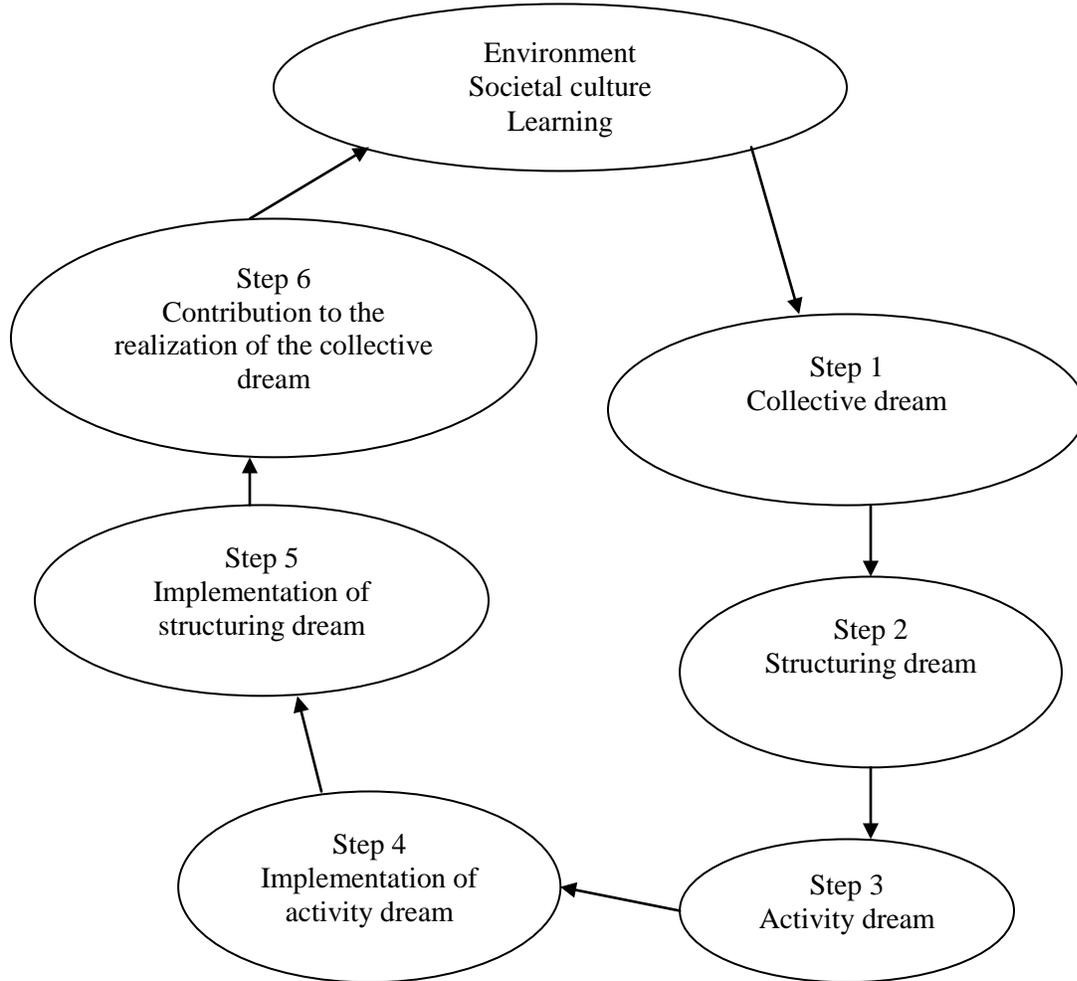
EP uses a clear and simple language. It explicitly formulates two basic questions: What is your dream about what you want to become? What is your project to help make this happen? In other words, What do you plan to do to realize your dream? The methodology uses a variety of support elements, mainly examples of what could be done and what other students have done in previous years.

The idea is to begin with structuring dreams that can be implemented easily. For instance, in poor communities, the SD might be to buy food for the mother, build a small house, buy a filter for potable drinking water at home, provide the means to celebrate birthday parties, go to a swimming pool or buy a new pair of shoes. As the students mature, the program will model the SDs on local entrepreneurs, but in the early years, the objective is to have students acquire positive reinforcement by accomplishing simple, easily achievable tasks.

EP is designed to develop increasing levels of freedom and self-confidence in making choices. In formulating an SD and a specific AD and attempting to make these materialize, children learn how to master an activity process: how to design and implement projects and what is required to succeed at this. They learn how to initiate and be responsible for their own accomplishments. The pedagogical exercises invite the children to projective and systemic thinking at incremental levels of complexity related to their level, a process that will influence decisions about future activities. Evaluation of entrepreneurship education programs shows there is an effect on entrepreneurial intention as it influences perceived behavioural control (Fayolle, Gailly et al., 2005).

Thus, the entrepreneurial learning cycle that results from the dreaming process may be summarized in six steps as follows. The process begins with a given society's culture and values and implicit or explicit CD. It is then expressed through thinking exercises about an SD that presents an image of the future one wishes to experience, be or become. Individuals then develop an image of something that could be realized—an AD—that will lead to the realization of the SD. This is the project component. Next, the individuals seek to implement the AD and, to do so, identify and learn whatever is necessary to realize this AD. The realization of one, but usually of several, ADs will contribute to realizing the SD. The realization of the SD will contribute to the realization of the CD. Learning takes place, a new situation is reached and the cycle begins again. The nature of the relationship between these moments will determine whether an entrepreneurial character is born and how intense that character will be. Figure 4 illustrates the process.

Figure 4
The Six Steps of the Dreaming Process and the Entrepreneurial Learning Cycle

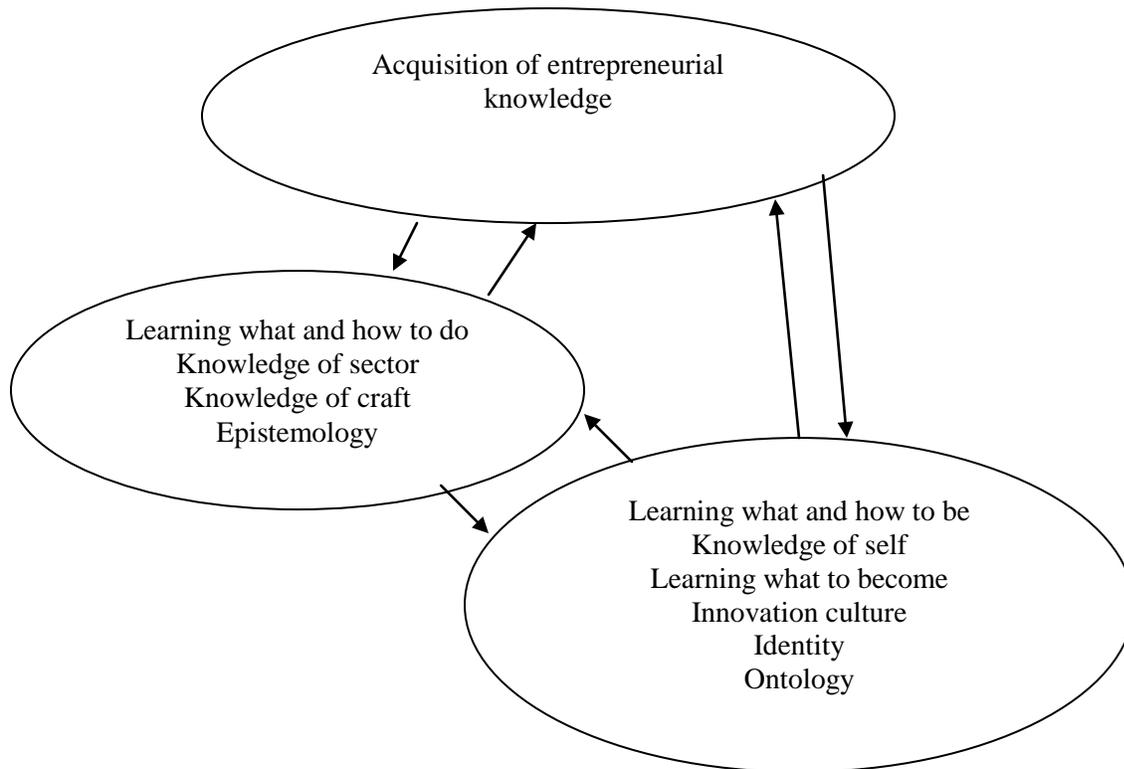


This learning exercise produces knowledge in various forms: know how to be, know how to become, know how to design and to implement activities, know how to do, know how to manage, know how to learn, and know how to get along with and make proper use of social capital. This knowledge is entrepreneurship-related and is called “entrepreneurial knowledge” (EK) or “enterprising knowledge.” It will be acquired in a dream-realization context where the ease of the student will become greater and greater. The tensions between the design, implementation and realization of CDs, SDs and ADs should come to a point where the student finds enjoyment, and even pleasure, in practising the cycle of entrepreneurial design and the carrying out of entrepreneurial activities.

The path to achieving ADs and SDs and the constant search to realize dreams should become the source that generates and maintains a high level of motivation and the emotional levels that foster in the individual both persistence and a capacity to endure, despite mistakes, difficulties and outside pressures. The ability to learn from one’s own mistakes makes the construction of EK a very different experience from the acquisition of other forms of knowledge, as it influences not only the acquisition of knowledge and know-how but also the formation of the self. Thus, individuals are constantly making explicit or implicit decisions about what they want to become and continuously assessing what can be achieved. Acquiring EK therefore implies an ongoing set of decisions about the making of the self.

Entrepreneurial behaviour also implies innovation—a contribution that will bring added value through the implementation of what was conceived. This is another factor that influences the acquisition of knowledge about what entrepreneurs-to-be are going through in their learning process. Figure 5 expresses this.

Figure 5
Acquisition of Entrepreneurial Knowledge, Epistemology and Ontology



Seeking the realization of the dream

The dynamics of EPM include the entrepreneurial learning cycle as shown in Figure 4: the dreams and the search for their realization. When involved in the task of realizing a dream, individuals will ponder the adequacy of the dream, the environment and the self. They will seek, in a self-sufficient manner, to deepen their self-knowledge and their understanding of the dream's environment. They will thus gain an increased awareness of the world and of others around them. Two phenomena are always present in this learning process. The first is an increased awareness of the self, others and the world around; the second is a set of decisions about the self and the activities to be undertaken.

This could well explain why the level of anxiety is often high among entrepreneurship students. They must learn to continuously make decisions about things to be done that have consequences for what they will become. At the same time, they are acquiring knowledge and know-how, just as other students are. Like the dream, the self undergoes alterations and continuous change. This is also expressed in Figure 5. Entrepreneurial decisions engender both epistemological consequences and ontological effects, particularly at the beginning of the entrepreneurial career.

Thus, the construction of EK is dynamic and often profoundly affects the shaping of the character the entrepreneur will become. This makes it a powerful form of education. Imagining SDs and ADs may be easier for some students than for others, but implementation and the final realization are the most difficult tasks for most students. These must fit the individual's system so that the individual remains in a state of equilibrium. We have called this decision-making process the structuring of the "ecological system of one's life" (Filion & Dolabela, 2000). Entrepreneurs-to-be who do not learn to do this harmoniously have a difficult time lasting as entrepreneurs as they are in a continuous state of disequilibrium.

The structuring of that "ecological system" is part of the basic learning that must be done to master the entrepreneurial craft. It requires an adequate knowledge of one's potential and sharp judgment about how to use oneself. Basic self-awareness skills must be acquired. The realization of dreams leads to ever-greater accomplishments. Such dynamic motion tells us that the formulation of a dream and then the search to realize it is a ceaseless process. This is so because the process must absorb and contemplate the changes taking place in the dreamer's life and environment. An ascending spiral motion, in which all parts are interrelated in a cause-and-effect manner, gradually shapes the person's entrepreneurial system.

Because entrepreneurship is a field of action, the connection between dreaming and seeking the realization of the dream is the essence of the process. The value of what is designed lies in its implementation and eventual realization. Entrepreneurs are action-oriented, another characteristic of entrepreneurship. Few other areas in the management education system require as much thinking about implementing activities, and few others are as action-oriented.

Nothing is more important than this connection. It will almost always lead one to redefine the elements of the dreaming process presented in Figure 4. On the one hand, dreams are in a constant state of mutation; on the other hand, the abilities, competencies and resources to realize these dreams are in a constant state of change. Hence, nothing is static. The greater the number of entrepreneurial projects, the more the entrepreneurial environment changes. In the process, one becomes used to dealing with situations characterized by both uncertainty and unpredictability; these become characteristic elements of the entrepreneurial environment.

This is why creativity is needed, and why entrepreneurs have to learn so much about what it means to be creative. Through creativity, entrepreneurs articulate who they are and, especially, what makes them different. This is expressed in the dreaming process. The expression of this differentiation leads to innovation, to do what is unique. The dream's author is always faced with the question, "What is the next step?" and the dream's author alone is able to find the answer that leads to new activities. In short, the pedagogical process is dedicated primarily to establishing a connection between the dreams, their implementation and their realization. This is because the latter, in its various forms, contains the dynamic elements from which the acts of dreaming and realizing dreams will continuously be constructed in the future.

Educational material²

The teachers' material includes Pedagogia empreendedora (Entrepreneurial pedagogy) (Dolabela, 2003b), which contains the theoretical and methodological principles of the EPM program as summarized in the preceding section. The "Cadernos" (Appendix 5) provide a bank of exercises designed to help the educator effectively use the EP approach in the classroom. There are also two educational novels to be used by both teachers and students, A Ponte mágica (The magic bridge) (Dolabela, 2004) for students

² Appendices 1 to 4 present a summary of each of the books used in EPM. Appendix 5 describes the "Cadernos," a series of teaching exercises developed to support the application of EPM in the classroom. Appendix 6 presents the objectives; Appendix 7 introduces the main methodological characteristics of EPM; and Appendix 8 presents the key components of the two-day teacher-training workshop.

aged 10 to 15, and *O Segredo de Luísa*³ (Luisa's Secret) (Dolabela, 1999) for students 16 and older. These books offer a rich reading experience and explain entrepreneurial activities and new venture creation through fascinating, real-life narratives. Teachers will find them an inspirational source for designing innovative courses and colourful teaching sessions. "Mapa dos Sonhos" (Dream map) (Dolabela, 2002) is the student guide for all grades. It leads students through a series of graduated exercises to formulate their dreams and their enterprising proposals and describe their proposed paths for implementation.

The application of the Entrepreneurial Pedagogy Methodology (EPM)

This Entrepreneurial Pedagogy Methodology is probably the first methodological approach to have applied entrepreneurial learning on such a large scale. It was designed for elementary and secondary levels but has so far been used only at the elementary level. Hundreds of people have been involved in thinking about ways to apply the methodology in their schools; thousands of teachers have used it; and hundreds of thousands of elementary-level students have come in contact with it in their classrooms. This methodology is not primarily about creating a pedagogical approach exclusively to prepare students to become entrepreneurs and create ventures. EPM conceives entrepreneurship as a state of being rather than just a way of doing and was designed to develop students' creative potential. Those involved in the program, and especially the teachers, are convinced the course will influence a large proportion of students to become entrepreneurs. Students demonstrate greater entrepreneurial behaviour immediately following the course, which indicates that a greater number will act more entrepreneurially in any activity in which they engage and in any area of employment they choose. They will also accept, and be more supportive of, other entrepreneurs and those who want to do something new and creative. The choice to become an entrepreneur is, of course, the student's and only the student's, but when the time comes for the students to choose a craft or professional activity, anything that concerns entrepreneurial activities will be part of their evoked system.

As the program continues to expand to other parts of Brazil, EPM is being disseminated through teacher workshops that introduce teachers to EPM and train them to offer the program to their students. The methodology training is both democratic and interactive. Processes are not imposed, and teachers learn from one another how to use EPM. Teachers design their own way of applying the basic principles: they can use EPM as it is or they can adapt it to suit their individual needs.

It could not be otherwise. EPM has to be applied in a wide variety of contexts. Moreover, what the methodology proposes does not deal with traditional cognitive content. It requires that the teacher be truly motivated and convinced of the methodology's suitability and effectiveness. The social and political aspects of the implementation cannot be underestimated. With a remarkably humanistic approach, EPM prepares the individual to actively participate in social development through the generation and, more importantly, the distribution, of income, keeping in mind the principles of quality of life, democratic practice and the elimination of social exclusion.

Results of the application of the Entrepreneurial Pedagogy Methodology (EPM): The experience in the state of Paraná, Brazil.

In an unprecedented undertaking, as of September 2003, EPM had been implemented in 123 cities in the state of Paraná as part of a major local development project promoted by Sebrae-Paraná.⁴ The cities

³ *O Segredo de Luísa* is the top best-seller ever written by a Brazilian and published in Brazil. By the end of 2004, it had sold over 100,000 copies.

⁴ Sebrae is a governmental organization that supports small and medium-sized enterprises.

selected had a maximum HDI-M⁵ of 0,800. Each city created a Forum of Local Development, a democratic umbrella organization of local leaders, to coordinate PSDL (Programa Sebrae de Desenvolvimento Local [Sebrae local development program]).

Fernando Dolabela coordinated the implementation of EPM, and sixteen consultants were trained to manage and coordinate the teacher workshops. Sebrae-Paraná financed the program, which had a global cost of US\$400,000.

The program guidelines in Sebrae-Paraná were as follows:

1 - EPM was implemented through the teachers of participating schools. In preparation, the teachers attended two types of training workshops:

- i. Methodology Workshop: 50 teachers learned how to apply EPM in the classroom. (See Appendix 8.)
- ii. Multiplier Workshop: 20 participants from the first workshop were trained to teach the Methodology Workshop to other teachers. (See Appendix 8.)

The number and proportion of teachers who attended the first and second workshops varied from state to state. For instance, the city of São José of Campos in the state of São Paulo has 2,000 public sector teachers. Two hundred teachers participated in the first Methodology Workshop and 20 teachers from that group were selected to give the Multiplier Workshop. These 20 teachers then offered methodology workshops to the remaining 1,800 teachers.

The teachers had never before participated in training of this type on such a scale. The experience changed their view of their work, and their motivation and level of involvement increased.

2 - EPM was developed for pre-school through secondary school.

3 - Objectives:

General: Over the long term, to generate cultural changes and develop competencies in all levels and classes of the population for the promotion of economic, human and social development.

Specific: To develop the students' entrepreneurial capacity, applicable to any legal activity.

4 - To participate, cities had to meet the following conditions:

- i. Have in place programs that promoted local development;
- ii. Have a maximum HDI-M of 0,800; and
- iii. Be represented by an association (a non-governmental organization). The constituted local powers (mayor, municipal administration) were responsible for the decision to accept the program, but the local leadership of the various organizations involved in local development had to commit to, and become involved in, implementation of the program.

5 - Responsibilities of Sebrae-Paraná:

- I Finance the program;
- ii Offer EPM, as developed and taught by Fernando Dolabela, to teachers who become trainers of other teachers;
- iii. Publicize the program;
- iv. Provide local political coordination; and

⁵ HDI-M (Index of Human Development – Municipal) is developed from a data bank of education indicators (literacy and rate of school frequency), longevity and income of the population of a city.

v. Monitor the program through evaluation reports from each of the participating cities.

6 - Responsibilities of the cities:

- i. Mobilize the leadership and all major organizations involved in local development in each of the cities involved;
- ii. Organize the necessary infrastructure for the teacher-training workshops and the students' courses and classes;
- iii. Monitor the application of the program content by the students in each municipal district; and
- iv. Complete a program evaluation report for Sebrae-Paraná at the end of the school year.

7 - Any city that failed to carry out any of its responsibilities would be prohibited from working with Sebrae-Paraná for a period of up to two years.

8 - All teachers of the schools in the selected cities were invited to teach the entrepreneurship program.

Phases of teacher training

A city leader in each municipal district gave a presentation to introduce the program. This phase was followed by two teacher-training workshops delivered by Fernando Dolabela.

1 - Presentation:

Target Group: Local support systems (political, economic, social leadership)

Objective: Demonstrate commitment to, and build support for, the Entrepreneurial Methodology Program

Duration: 2 hours

2 - Methodology Workshop:

Target Group: Directors, supervisors and teachers from the schools involved

Objective: Prepare teachers and educators to implement EPM

Duration: 16 hours—two days of immersion

Maximum number of participants: 50

3 - Multiplier Workshop:

Target Group: Teachers with the profile of multiplier (a subgroup selected from among the participants of the Methodology Workshop)

Objective: To generate self-sufficiency in the municipal district by training the teachers to become "trainers" of other teachers and to monitor the EPM implementation process

Duration: 16 hours—two days of immersion

Maximum number of participants: 20

Problems that arose during the implementation process were mainly political in nature and fell into two categories:

a – Opposition to using the structured political process to support development; and

b – Opposition to the term "entrepreneurship." The term was rejected by those who consider themselves on the "left" and who associate entrepreneurship with capitalism and exploitation.

Table 3
Implementation of EPM Through Sebrae in the State of Paraná, Brazil
2002–2004

Number of cities involved	123
Total population of cities involved	2,257,150
Number of schools involved	1,566
Number of teachers involved	6,352
Number of students involved	173,304
Cost	US\$400,000.

Evaluation

The program was evaluated at each stage of the process.

1 - First evaluation:

The first evaluation took place after the teacher-training workshops. It consisted of a subjective analysis of the strengths and weaknesses of the implementation process that had been suggested during the workshops to allow teachers to make adjustments to the methodology before beginning to use EPM in the classroom.

Sources of information:

- Teachers and educators
- EPM consultants
- Sebrae technicians

2 - Second evaluation:

The second evaluation is designed to measure the degree of satisfaction of the program's principal actors and sponsors. Scheduled for 2005, it is financed by Sebrae-Paraná.

Questionnaires will be distributed, through sampling, to those involved: support actors, teachers and students. The evaluation will focus on the relationships between the various actors involved in the program.

The following are examples of what will be assessed:

1. Relationship between the school and the local body representing the Ministry of Education (This body may differ from one state to another.)
2. Relationship between the local body representing the Ministry of Education and City Hall
3. Teachers' assessment of EPM
4. Students' assessment of EPM
5. Teacher-student relationships
6. Student-family relationships: What is the family's assessment of the changes in the student?
7. Family-EP relationship: What is the family's assessment of EP?
8. School-community relationship: How has EP changed the relationship between the school and the community?

The experience has shown that teachers easily understand the process. They have worked enthusiastically to implement EP wherever it has been proposed. In many cases, they also began to formulate and implement their own dreams.

The decision of whether or not to implement EPM was left to either the school or the teachers who had taken the training, rather than to the educational hierarchy. This proved to be appropriate to the nature of the project. The teachers based their decisions on whether they perceived a need to incorporate the acquisition of life skills, as proposed by EPM, into the students' curriculum.

The teachers were motivated and enthusiastic, and all decided to use the program. The community's involvement and the general will to develop the entrepreneurial expression of children provided further evidence of EPM's effectiveness. The general perception was that the program allowed the children to acquire additional tools that could be useful for them in life.

EPM has already produced extraordinary results. The reception has been far greater than anticipated, suggesting that perhaps a revolution in basic education is in process in Brazil. In every school that has implemented EPM, student dropout rates have decreased, academic results have improved,⁷ and students have demonstrated a greater desire to learn. The results offer encouraging support for continuing to develop and expand EPM.

Conclusion

Education should contribute to developing one of society's principal natural resources: its human capital. This implies the involvement not only of teachers, but also of others concerned with children's development—in particular, the parents and those working in social and economic development.

The idea behind EPM is to identify a minimum of human resources to help build bridges that will allow entrepreneurial education to establish itself and begin to develop. This perspective implies that people perceive a common interest in cooperation that may help them put aside individual differences. In choosing to work with EPM, those involved in primary and secondary education show they are determined to apply the six steps of the dreaming process as presented in Figure 4. In secondary education, the program may lead to the creation of real business ventures where students sell their products in school fairs at the end of the school year.

A key EPM innovation is involving the community to develop CDs and discuss the type of world people wish to live in. This clearly contributes to increasing the legitimacy of public sector institutions in a country where there is an increasing awareness of the need to improve quality of life, personal safety and equality of opportunities. EPM helps create social consensus in social microcosms around education projects that can be implemented in the education system. This process could be expanded and applied to a greater extent in other areas of society.

Another contribution concerns the teachers and the effectiveness of the education system. Education often serves to maintain and reinforce the existing social order, but in a country undergoing rapid development such as Brazil, education can also become a key element in supporting rapid social change. EPM was designed to offer a path to freedom for as many young children as possible—all those who want to start dreaming and to bring these dreams to fruition.

⁷ Data are being gathered and will be made public.

The program should improve self-esteem and the level of control people are able to exercise over their destiny.

EPM's primary contribution, of course, is to the students, who will leave school with a slate of tools that prepares them in a better way for today's world. It is hoped the program will encourage a greater commitment to social responsibility and contribution. EPM aims to increase not only achievement and entrepreneurial consciousness, but also the ethical and social concerns of students.

EPM will need to be refined and further adapted for both individual cities and curriculum levels. Those who have been involved in the program are already advocating having it made available in the other levels of their schools. And they want the program to work along the same lines every year: dreaming and implementing the dreams. It is obvious that a need has been only partially met. The program has opened a door for developing further educational approaches and material that will allow students to reflect on themselves and their future and develop their imaginations, and that will give them tools to better satisfy their desire for achievement. The experiment described here is probably unique in the world, and could serve as a model for transforming other education systems, both in countries with emerging economies and those wishing to revitalize the development of their greatest natural wealth – the entrepreneurial potential of their human resources.

The experiment is based on a systemic and visionary theory by which entrepreneurship is first and foremost a way of thinking and acting that can be learned. To go further along this road, new research will be required in the fields of entrepreneurship and education. In entrepreneurship, a better understanding of the steps in the development of visionary thinking is needed. In education, the relationship between the different steps in the development of intelligence must be clarified by reference to models such as those of Piaget and the learning methods that are most appropriate for introducing the entrepreneurial and visionary viewpoint.

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Appendix 1
Pedagogia empreendedora
Author: Fernando Dolabela

Pedagogia empreendedora (Entrepreneurial pedagogy) describes the Entrepreneurial Pedagogy Methodology developed for Brazilian basic education (nursery school through secondary school—4 to 17 years of age).

First tested in 2002, the methodology has been used in 123 cities and involved more than 10,000 teachers and 300,000 students—with repercussions for a population of 2.5 million—in the states of Minas Gerais, São Paulo, Paraná and Rio Grande do Sul.

Its challenge? To build new values in Brazilian society, a society marked today by enormous differences of income, power and knowledge. Using the dream as its axis, the Entrepreneurial Pedagogy Methodology aims to stimulate the formation of structured dreams and help the dreamer accomplish the dream.

The methodology is based on the concept of social inclusion/social development. It endeavours to promote a liaison between entrepreneurship as venture creation—where it is tied to the restrictive idea of economic growth—and all sectors of human activity. The central theme of the methodology is that entrepreneurship education in Brazil should aim to fight poverty through social development. If it does not, large segments of the population will continue to be denied the possibility of generating income and benefiting from wealth.

140 pages.

Published: August 2003, Cultura Editores

Sales: 13,000 copies

Appendix 2
O Segredo de Luísa
Author: Fernando Dolabela

Released in June 1999, O Segredo de Luísa (Luisa's secret) immediately became a national best-seller. The author wrote the book in novel form because he believes that entrepreneurial content—as a cultural process—must be conveyed differently from purely intellectual knowledge. In a simple and compelling style, the narrative easily carries readers of all ages and education to the story's end. Before they know it, they have been immersed in entrepreneurial culture.

O Segredo de Luísa makes the connection between the basic principles of entrepreneurship and the life of a real entrepreneur. Luísa, a recently trained dentist who would like to have her own business, decides to transform her idea into reality. Along with Luísa, the reader discovers what is involved in creating a company and learns how to use tools that guarantee the solidity and survival of the business. Key details of a business plan are given. The book is also presented in a revolutionary form using the concept of hypertext, which allows the reader to open windows, select a word and then more deeply explore information about this word.

The author demonstrates that passion, ambition and persistence make up the entrepreneur's profile, and that anyone can develop these characteristics to achieve their dreams. The narrative often has an emotional impact. Readers frequently comment, “he book touched my heart; something moved in me.”

O Segredo de Luísa is a serious, timely and eye-opening work. In a world of increasing unemployment, we must provide our youth with an alternative by stimulating their entrepreneurial spirit and giving them tools with which to find their place in the labour market.

320 pages
Published: June 1999, Cultura Editores
Sales: 100,000 copies.
All-time Brazilian national best-seller

Appendix 3
A Ponte mágica
Author: Fernando Dolabela

A Ponte mágica (The magic bridge) is an educational novel in the style of O Segredo de Luísa. It was written as instructional material for elementary-level students 11 to 15 years of age—youth filled with energy and creativity ready to be transformed into reality.

Together with Pedagogia empreendedora (Entrepreneurial pedagogy) (2003) and “Minha Empresa” (My new venture) business plan software for adolescents, A Ponte mágica completes the trilogy of material developed for the entrepreneurship education methodology at the basic education level. The novel is targeted to a young audience, but teachers may find it a source of inspiration for educational field trips.

The protagonist of the story is the same Luísa of O Segredo de Luísa, but as a child of eleven. Using entrepreneurship solutions for the drama that affects her life, the book in a sense illustrates a Brazilian tragedy: the great gap between rich and poor. Against the backdrop of a small city, the young Luísa follows an unusual entrepreneurial path that shows that even the dream of a child, if instilled with a democratic ideology, can help fight poverty. In striving to achieve her own dream, Luisa finds that true happiness lies in producing what is useful to others. She understands why individual dreams should contribute to a larger dream—the collective dream—that looks to the well-being of the whole community.

166 pages

Published: 2004, Cultura Editores

Sales: 3,000 copies

Appendix 4
Mapa dos Sonhos
Author: Fernando Dolabela (2002)

“Mapa dos Sonhos” (Dream map) is the student guide for the entire EPM program. It provides a simple, structured document in which the students describe their dreams and record in detail the paths and strategies they will use to achieve them. The students identify how they will reach their objectives, what they should learn and the resources they will use.

Mapa dos Sonhos has not been commercially published and is available only to schools that use the Entrepreneurial Pedagogy Methodology. Designed as an open-ended resource, it can be adapted by the teachers according to their needs.

Appendix 5
Teaching Material: Cadernos

Authors/Educators: Cordélia Rodrigues, Sergio Godinho de Oliveira, José Eduardo Vidigal, Sylvia Zanetti, Magda Maria Menezes, Romênia Ayla Moraes, Romilda Rabelo Duarte, Clara Amaral Campos, Fernando Dolabela

The “adernos” (Notebooks) contain exercises designed to help the teacher apply the Entrepreneurial Pedagogy Methodology in the classroom. The exercises seek to develop the support elements proposed by Filion (1991 a and b): vision, relations, self-concept, leadership and self-space. They prepare the students to accomplish their dreams.

There are 14 Cadernos, one for each level of basic education. Each contains 40 exercises, one for each week of the program, for a total of 560 exercises in the full series.

The Cadernos provide beginning EPM teachers with a concrete instrument for the classroom. As teachers acquire experience, however, they are invited to develop their own exercises, which would be adapted to a greater degree to the students' reality.

Appendix 6
Objectives of the Entrepreneurial Pedagogy Methodology (EPM)

PM aims to:

- Have students adopt entrepreneurial behaviour in all their activities and understand that development is a result of human behaviour that can be made more entrepreneurial;
- Construct socially responsible forms of entrepreneurship that both generate and share income, knowledge and power;
- Educate students to be more socially concerned and actively involved in the development of their community;
- Offer the students a theme around which they can organize their learning;
- Help students be more motivated to learn and to keep learning;
- Support teacher motivation, especially in more turbulent communities; and
- Be an agent for deep cultural change in education and in society.

Appendix 7

Characteristics of the Entrepreneurial Pedagogy Methodology (EPM)

The following are the main characteristics of EPM:

- Involves each institution's teachers, as they are familiar with the institutional culture, the students and the community environment in which each school functions;
- Helps teachers express previously acquired knowledge and experiences related to entrepreneurial practice;
- Is application-oriented, and thus easy to implement;
- Is not about following a recipe or step-by-step guidebook. Each teacher must adapt EPM, taking into consideration local cultures: the community's, the students', the institution's and the teachers';
- Offers specific and unique educational material, designed and written entirely to support the learning of entrepreneurship within the Brazilian context;
- Allows for the quick dissemination of the entrepreneurial culture: is designed for large-scale application and a wide geographical area;
- Does not require the training of "experts"; does not generate dependence on outsourced consultants;
- Integrates teachers from different areas;
- Is low-cost: does not duplicate means and efforts;
- Involves the community intensely, as both educator and learner;
- Sees the school as a representation and a microcosm of the community;
- Offers tools to allow human and social capital to express entrepreneurial potential and to be more highly valued;
- Is supported by the design of a collective dream—the construction of a future by and for the community; and
- Includes technological aids such as videos, DVDs and computer programs.

Appendix 8
Key Components of the Teacher-Training Workshop
(Methodology Workshop)

Day 1

Concept of entrepreneurship and the Entrepreneurial Pedagogy Methodology (EPM)

Entrepreneurship: talent or competence?

How is the entrepreneur born?

The culture of dependence

The entrepreneur as perceived by EPM

Concepts of “success” and “failure”

Dreams and vision

Filion’s support elements

Self-concept

Energy

Leadership

Sector knowledge

Relations

Self-space

Brazilian culture

Pyramid of power and ideology

Cultural ruptures that result in the individual's partial participation in a productive life

Sustainable development (IDH) versus economic growth (GNP)

Human capital and social capital

The role of the family in encouraging or discouraging entrepreneurial spirit

The school

The school’s role in EPM

The educator's role in EPM

The entrepreneurial education curriculum and how it can accommodate the students' dreams

The ethics of the dream

Challenging dreams for the educator

How social values define the individual dream

Day 2

Community and the collective dream

Exercises

Video of the pilot test

The case of the garbage truck

A look at a local entrepreneur

Analysis of the Cadernos and Mapa dos Sonhos

Overview of the EPM concept

Evaluation

Final considerations / All are invited to make comments / Closing

AUTHORS' BIOGRAPHICAL SKETCHES

Fernando Dolabela and Louis Jacques Filion have worked together since the early 1990s, after Dolabela attended a workshop on entrepreneurship education presented by Filion. Filion's research is based on systems thinking. The workshop was on the need to develop the right side of the brain at all levels of the education process to prepare students to become potential entrepreneurial actors. The authors have developed several entrepreneurship support projects together, mainly related to support systems for entrepreneurs and new venture creations in higher education.

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Louis Jacques Filion is Rogers–J.A. Bombardier Professor of Entrepreneurship at HEC Montréal. His academic background includes a B.A. (Classics), an Honours B.A., an M.A. in International Studies, an M.B.A. and a Ph.D. in Systems and Entrepreneurship. As an entrepreneur, he created, managed and developed small businesses. He was a management consultant with Ernst & Young and, from 1981 to 1993, assistant and associate professor at the University of Québec. He has been at HEC Montréal since 1993 and chair of entrepreneurship since 1995. In 2004, he received the Lifetime Achievement Award from the Canadian Council for Small Business and Entrepreneurship (CCSBE/CCPME). In 2005, he received the Wilford White Fellow from the International Council for Small Business (ICSB). He has more than 200 publications to his name, including several books.

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Fernando Dolabela is Professor of Entrepreneurship at Fundação Dom Cabral, Brazil. He is the founder of the most significant entrepreneurship teaching programs for universities and basic education (ages 4 to 17) in Brazil. His methodologies link entrepreneurship education with social and sustainable development technologies. Approximately 400 institutions of higher learning have adopted his system and methodology "Oficina do Empreendedor." His experience with children's education is unique. Since its first year (2003), the Pedagogia Empreendedora (entrepreneurial pedagogy) methodology has been implemented in 123 cities in Brazil. Dolabela has published nine books. In O Segredo de Luísa, the all-time Brazilian national best-seller, he uses a narrative style to convey the entrepreneurship content.

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