

SESI Social Entrepreneurship Program in the state of Paraná / BR: Triple Helix in action

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Abstract: Social issues in developing countries require the pursuit for innovative solutions due to the amplitude and typology of those shortcomings. Organizations and universities can collaborate for the development of such solutions, mainly through the creation and adoption of social innovations. Social innovation is no new phenomenon, and its concept covers the construction of a new way to meet social demands. This way, in Brazil, since 2005 FINEP has included social innovation in the FINEP Award for technological innovation. The Social Entrepreneurship Service (SESI), an industry representative entity in the country, perceiving the need to form qualified professionals for the conception and implementation of social projects, has developed an announcement named “Diretrizes de Incentivo do Departamento Nacional para os Programas Estratégicos do SESI – 2005 Educação, Lazer e Saúde (Incentive Guidelines from the National Department for SESI Strategic Programs – 2005 Education, Leisure and Health).” SESI in the state of Paraná (PR), after a broad analysis, established a focus on Social Entrepreneurship. For SESI (PR) to create the Social Entrepreneurship Program, a partnership has been established with the Santa Catarina Teaching and Engineering Foundation (FEESC), an institution linked to the Santa Catarina Federal University (UFSC) that has broad knowledge of entrepreneurship and masters Remote Education (EAD) technologies. The focus of this paper is to present the methodology built to develop technical and human competences for the social entrepreneur by means of the partnership formed. This paper has a qualitative nature including bibliographical revision and data collection by means of interviews with the persons responsible for the development of the Program and methodology. The results obtained and the consolidation of the three editions (2006, 2007, and 2008) show the quality and the adequateness of the creation of the Program. The interaction between Industry (SESI) and University (UFSC/FEESC) with government incentive (FINEP) corresponds to the proposal of the Triple Helix by seeking to solve social and economic crises and generating sustainable social efforts. Dissemination of the methodology and results may contribute to the emergence of new proposals for social innovations, to meet existing social needs, and the regional development.

Keywords: Social Entrepreneurship, Social Innovation, Methodology, Partnership, Regional Development.

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1 Introduction

The pursuit for solutions for social issues involves the development of innovative proposals by all agents involved. Above all, in developing countries, the efforts are even bigger, given the diversity and magnitude of those issues. According to Carvalho (2009), studies have been made in an attempt to identify the factors that would allow some countries and regions to stand out in the international scenario (Lundvall, 1985; Freeman, 1995; OECD, 1997; Lundvall et al, 2002). In the 60s and 70s, those studies have found that one of the explanations was related to the innovation systems. Moreover, it was observed that the knowledge required for innovation came in several forms, via clients, production and marketing as well as the universities and the industries' technical centers. One important issue was how to integrate all contributions in one concept of innovation process.

The emergence of the concept of a national innovation system in the 80s, with Lundvall, solves the issue of the integration of the several contributions, which include industries, companies and other players, as well as governments. The varied composition of players and their contributions lead to analyze towards a complex environment in which the concept of a system adjusts itself. Nationally, the actions from universities, company chains, government agencies and policies may be seen in an aggregate manner: interacting with the outside environment.

One important issue concerning an innovation system is in regards to the identification of the several players and the analysis of their roles in such system. Basically, three players have been identified: the university, industry, and the governments at their several jurisdictions. Several models are known and used to analyze the relations of those three players. They are: The Sabato's Triangle, Triple Helix, the national innovative capacity, and the chain connections (Carvalho, 2009, p.105). This research considers Sabato's and Triple Helix models, the latter being the focus of the paper.

In this sense, the Triple Helix is used as a model for interaction between the Industry (SESI) and the University (UFSC/FEESC) with government incentive (FINEP) since, as Etzkowitz (2009) states, the Triple Helix is a platform for the "formation of institutions," the creation of new organizational formats that promote innovation, for example, the SESI-PR Social Entrepreneurship Program. This Program was established by SESI in 2006, with the creation of a methodology for qualification and development of social entrepreneurs.

The purpose of the present article is to present the methodology built to develop technical and human competences for the social entrepreneur by means of the partnership formed. It is a qualitative research, a case study using bibliographical and documental research and primary data in the three first editions of the SESI – PR Social Entrepreneurship Program.

2 Players and models in the innovation triad

Models are developed to demonstrate and analyze the relations between the players involved in the development of an innovation system. The three players – industry, university and governments – establish partnerships and elaborate policies and projects. Among such models, the study highlights Sabato's Triangle and the Triple Helix.

Sabato's Triangle reflects the concern about the relations between the government, scientific and technological infrastructure and productive structure. In this model, the government would be on the top and the others on the base. It describes the intra-relations (existing relations between components of the same vertex), the inter-relations (relations between different vertex pairs) and the extra-relations (relations between one of the elements and the outside, for example, scientific exchange, foreign trade of technologies, adapting imported technologies) (Carvalho, 2009; Plonski, 1998).

According to Sábato & Botana (1968), the three relations are important, but the inter-relations are considered as fundamental for the development of the productive sector since, besides requiring an improvement in the intra-relations, they are the basis for the articulation with other external triangles. In turn, the interrelations of the horizontal kind (scientific-technological infrastructure and productive structure) constitute the basis of the triangle, and are the hardest to establish. What is important is to assure the interrelations between the three vertexes.

Sábato & Botana (1968) advocate that science and technology are dynamic and express a strategy to take actions towards the sense of inserting science and technology into the development process in Latin America. The authors specifically reflect the Latin American situation, and reach the conclusion that the relations between the three elements were weak for the current context at the time.

In turn, the Triple Helix model was developed by Etzkowitz & Leydesdorff (1996), and is based on innovation and its dynamics in an evolutionary perspective, with the three players – government, industry and university - being configured as three vanes in the same helix. The relations between the three types of institution are collaborative and reciprocating, with each participant collaborating towards the improvement of another.

According to Etzkowitz (2009), the Triple Helix arises from two distinct points of view that give origin to distinct formats: the first format is the *statist*, in which the government controls the university and the industry, and the second is the *laissez-faire*, in which the three players act separately by well marked off borders. Those two formats represent antagonistic positions in the government-industry relation, and the first representation is when the government prevails; in the second representation, the industry is dominant, although with differentiated emphasis, compared to the first one.

One third form presents a configuration in which the three jurisdictions overlap, at a certain point, and present a differentiated dynamics from the two previous formats. It is called the hybrid model, consisting of three-sided networks.

The Triple Helix is the improvement of Sabato's Triangle, as its starting point is the same three segments (university-industry-government). However, it goes from the triangle stiffness to the helix dynamics, giving mobility to the three segments without a fixed, contained position. In the Triple Helix each helix has its own life, characteristics, standards and configurations. However, it presents a core, an overlapping area, in which the three segments work together within one same space in the fusion process, without losing its basic characteristics.

The three players – University, Government and Industry – can establish several ways of interaction, either turned to the contents or the form. The relations can be either bilateral or multilateral, isolated or global in the long term, direct or mediated; spontaneous or induced; local, regional, national, or international, either involving or not financial, material, and technical resources. Ultimately, they are interactions adapted to the circumstances of the moment, to the context in which they happen. Each sector in the economy has a distinct possibility of interacting with the academic community (Etzkowitz, 2009).

According to Etzkowitz (2009), the universities, industries and governments adopt each other's role in the Triple Helix interaction, even if they maintain their primary roles and distinct identities. The university plays the role of the industry by stimulating the development of new companies from research, that is, it “capitalizes knowledge” as an academic objective.

According to Etzkowitz (2009) the Triple Helix model is concentrated on the university as a source of entrepreneurship and technology, as well as critical investigation, which does not occur in the theories that emphasize the role of the government or the companies in innovation.

2.1 University-Industry-Government Relation

According to Borges (2006), in order to understand the University and Industry relation it is important to return to classical authors of the economic development theory, such as Adam Smith and Josef Schumpeter, who relate the importance of knowledge for development. Schumpeter's theory on economic cycle is reflected on contemporary economic science as it considers that the reason for the economy to sway from a state of balance, and enter into an expansion process, is the arising of an innovation that would alter the natural balance conditions.

Although his studies do not approach directly the relation between the Industry and University, Schumpeter contributes to a theoretical basis towards such interaction within a dynamic process (Borges, 2006).

The role the university plays in economic and social development has been changing, and this institution, incentivized by the government, has been expanding its activities: building knowledge and developing labor for cooperation with the corporate sector, markedly the industry.

Borges (2006) points out that the University and the Industry follow distinct logics that reflect both on the reference points and on the standards it guides, in addition to the influence of the context in which they are located, the diversity of environments, sectors, or areas in which they operate.

They are influenced and have requirements related to the particularities of the innovative process with their different stages, and to detailing and specifying the activities of both (university and industry) forged by their socioeconomic and cultural values, and in the structuring of institutional arrangements, which are influenced by environmental demands and stimuli. Those interactions occur or have their drive motor related to the innovation process.

The government can develop and plan innovation by means of policies, government bodies, projects, state companies and the promulgation of laws and other kinds of measures. Those forms of incentive allow for the approximation of the university and industry, and for the economic development and the solution of social issues.

In Brazil, the government body responsible for incentivizing innovation is the Ministry of Science and Technology (MCT), whose competences are issues related to national scientific, technological and innovation research policies, as well as the development of computing and automation; aerospace policy; nuclear policy and sensitive goods and services export control; and planning, coordination, supervision and control of science and technology activities (MCT, 2010).

The MCT structure comprises 19 scientific, technological and innovation research units, four state companies, two development agencies and other bodies. Through the development agencies in the Country – the Studies and Projects Financier (FINEP) and the National Council for Scientific and Technological Development (CNPq) and the research units, MCT coordinates the execution work for programs and actions that consolidate the National Science, Technology and Innovation Policy.

According to MCT (2010), “the objective of this policy is to transform the sector into a strategic component in social and economic development in Brazil, contributing towards its benefits being fairly distributed to all society.” In this sense, in 2004 the Law of innovation was created that “establishes measures of incentive to innovation and scientific and technological research in the production environment regarding qualification, achieving technological autonomy, and the industrial development in the Country, under the provisions of articles 218 and 219 of the Constitution”.

In Brazil, differently from developed countries, participation of the private sector is low in expenditure with Research and Development (R&D). Thus, the role of the Government in the country is to provide incentives for the development and communication of ideas by the private sector. It would be a form of incentive to the companies to invest in R&D (Rossino, 2006).

According to the same author, the State can undertake functions such as a planner and developer in case it intends to apply a Science, Technology, and Innovation policy that would collaborate towards the development in the long term.

One of the development actions was the institution of the FINEP Technological Innovation Award in 1998. The objective of FINEP is to promote and finance innovation and scientific and technological research at universities, companies, research centers and other public and private institutions by mobilizing its financial resources and integrating institutions for the economic and social development in the country (FINEP, 2010).

The first two editions of the FINEP Technological Innovation Award was restricted to the Southern region in Brazil. In 2000, it was extended to all Brazilian regions, including in 2001 a specific category for small companies, and, in 2005, the Social Innovation category was included, having its name changed to Social Technology in 2008.

Rossino (2006) states that the Triple Helix theory stands out for demonstrating the interaction between government, university and industry, where the knowledge built at the universities, and

supported by government bodies and private initiative, reaches the marketplace in the form of products and services.

3 Methodology

The present paper is a research of a qualitative nature, a case study that adopts bibliographical and documental survey and makes use of primary data collected by means of interviews with the persons responsible for the elaboration of the SESI-PR Social Entrepreneurship Program and its methodology.

According to Yin (2001) the case study is of empirical character and investigates a phenomenon of reality. Likewise, Cauchick Miguel (2010) states that a case study provides benefits such as the possibility for the development of new theories and increased understanding of actual, contemporary events.

4 Innovation and Entrepreneurship

Schumpeter (1961) states that capitalism is an evolutionary process, and investigates the economic change and the nature of such changes. He understands that development arises as a phenomenon that emerges from within production structures, through own initiatives and are not imposed from outside. Old structures are destroyed while new ones are built. According to this author, development would be an intermittent and spontaneous process that breaks the balance that existed until then to generate new products, new markets and production processes.

This way, in order for economic development to occur, the role of the businessman is analyzed, and he would be responsible for innovation, in distinction from the capitalist, since the former is supposed to guide the changes and the latter, to supply credit for changes to occur.

According to Andrade (2006), Schumpeter considered that “entrepreneurial behavior, with the introduction and broadening of technological and organizational innovations in the companies, constitutes an essential factor for the transformation in the economic domain and its development in the long term.”

Andrade (2006, p. 141) discusses the articulation of technological innovation and social innovation, calling attention to the need to discuss the contents and not only the form of the innovative dynamics. He also states that with the emergence of the Economics of Knowledge in the early 1990s, there is a shift in the form of relation between the industrial and technological dimensions when a pedagogic aspect is added. The interaction of companies with and within the system “goes on to acquire strategic significance and the standards of efficiency depend on mastering complex organizational practices” (Andrade, 2006, p.147).

Despite not being a recent phenomenon, social innovation is still little known. Social innovations are considered a differentiated response to the usual way of meeting social demands.

According to Tobar *apud* Fleury (2001, p.4) social innovation may be understood as “the capacity of transforming a society by undertaking its own needs and modifying its structures in order to incorporate technological solutions.”

Almeida (2007) states that it is usually considered that innovations feature an economic character only and are linked to a function of production: they are product, process, organizational, and marketing innovations, just as they are defined in the 3rd edition of the Oslo Manual. However, there are social innovations that are linked to the well-being of individuals or communities through employment, consumption and participation that may take on the most diverse forms. Insertion companies, a telephone line for risk group support, microcredit and free software are just a few examples.

According to OECD (1997), social innovations seek new solutions for social and economic problems, identifying and assuring new services that improve life quality of individuals through,

for example, the implementation of new integration processes in the job market, new competences, new jobs and new ways of participating.

According to Phills Jr. *et al* (2008) social innovation is the best construct to understand the production of long lasting social changes. They further state that it is a new solution for social issues, being more effective, efficient, and sustainable than the existing solutions and that it creates value mainly for society as a whole and not for individuals only.

One of the forms of social innovation is social entrepreneurship, which modifies the relation of dependence of philanthropic view by allowing individuals to create conditions to solve social problems through enterprising activities.

Dees (1998, p.1) states that social entrepreneurship is an expression of our time and that it “blends the passion of a social mission with an image of discipline linked to management, innovation and determination that belong to high technology pioneers.” He further states that social entrepreneurs are needed to develop new models for a new century.

Guclu, Dees & Anderson (2002) state that all entrepreneurship activities start off with the vision of an attractive opportunity and, in the case of social entrepreneurs, the attractive opportunity is one that has enough potential to cause a positive social impact and justifies the investment in time, energy and money required.

According to Dees (1998, p.3) “the language might be new, but not the phenomenon.” There have always been social entrepreneurs that founded many of the institutions we know today without such designation though. But that the new designation is important because it turns the frontiers between sectors weaker.

According to Oliveira (2004, p.15) the concept is being built, both in Brazil and worldwide. He further states that there are two types of organization that currently disseminate the concept and practice of social entrepreneurship. Beyond establishing hierarchies or levels, such division intends to assist the understanding of the social entrepreneur activities. One of the types of organization “operates as the sustainer, capacitor and broadcaster, as is the case of Ashoka abroad and in Brazil, and Foud Schwab in Switzerland.” They recruit and maintain for some time the sustenance of the social entrepreneur, both personal and technical. The second type of organization is the one that operates at the operational level with local interventions, executing and improving technical knowledge of management and innovation in the social field.

According to Guclu, Dees & Anderson (2002) the attractive enterprising opportunities do not knock at the door fully formalized. According to them, they need to be developed and refined in a dynamic, creative and attentive process. This way, one example is the SESI PR Social Entrepreneurship Program.

5 SESI PR Social Entrepreneurship Program

The Industry Social Service (SESI) was created in July 1946 and is a private entity maintained and administrated with financial resources from and chaired by the industrial business community. It is comprised by a national department in Brasília and regional departments in the Brazilian states. Although they follow the national guidelines, they operate with administrative management autonomy (Lezana *et al*, 2008).

SESI is an institution whose mission is to develop workers and their next of kin quality of life and focuses on education, health and leisure while motivating socially responsible management of industrial companies. It has a vision of being the national leader in promoting the improvement of workers and their next of kin quality of life and the socially responsible management of industrial companies.

By adopting a differentiated behavior, SESI-PR, in addition to supporting the industries in their activities to improve knowledge and develop the health of their workers, also participates of social projects for the community. There are three arms: Education for the New Industry, Healthy Industry, and Corporate Social Responsibility. With this point of view, SESI Paraná drives its activities towards programs focused on regional development and innovation, such as social entrepreneurship, digital inclusion, social innovation network, among others (SESI, 2009).

Detecting the need for development to meet the demand for qualified professionals to generate and implement social projects, National SESI launched an announcement named “Incentive Guidelines from the National Department for SESI Strategic Programs – 2005: Education, Leisure and Health.” SESI-PR responded to the announcement that presented as an objective “consolidate the systemic unit, boost new technologies, strengthen strategic programs and promote the expansion of service to the industrial company” (Farfus et al. 2007, p.130).

SESI-Paraná unit determined the focus on social entrepreneurship so as to follow up on the changes and develop social activities and also create a plentiful environment for the generation of ideas, development of competences in the social entrepreneurship area and the construction “of an own methodology for the realization of this process, that also looked at the dissemination of social entrepreneurship culture in the State of Paraná” (FARFUS et al, 2007, p. 130.).

In 2006, SESI Paraná developed several activities focused on innovation and social issues, among which is the SESI-PR Social Entrepreneurship Program. The strategies created aimed at developing competences for the social entrepreneur, and competence is understood as knowledge, knowing how to do and knowing how to make it happen.

After the bidding process, a partnership was established to implement the proposal with the Santa Catarina Teaching and Engineering Foundation (FEESC), an institution which supports the Santa Catarina Federal University (UFSC) which has activities in entrepreneurship and masters EAD technologies.

The model adopted in 2006 was jointly conceived by SESI-PR and UFSC/FEESC to implement the program as a pilot. Comprising four modules, it approached the following themes:

- I. The individual;
- II. Business Plan;
- III. Social Entrepreneur;
- IV. Finances and Sources of Financing.

According to Farfus et al (2007, p.131) the design of the methodology served as a base to master the remote education (EAD) teaching tool, consistent theoretical support, public presentation techniques, oral communication development, broadening of the relationship network, systemic view and respect for diversity, among other aspects.

5.1 Program Methodology

The proposal for the Social Entrepreneurship pilot program began in 2006. This project included the transformation of ideas brought by participants in business plans and its follow up for one year after finishing qualification, period where the results begin to appear.

The model of the first edition adopts the following methodology:

- a) Definition of a semi distance learning proposal making use of both classroom sessions and EAD tool;
- b) Serving all municipalities in Paraná, with logistics and infrastructure design to serve social entrepreneurs;
- c) Program comprising four modules: the individual, business plan, the social entrepreneur, and sources of financing and finances;
- d) Specific module to present the business plans developed by the social entrepreneurs in the program;
- e) Use of the Eureka Remote Education (EAD) platform, which allows for asynchronous and synchronous periods for the introduction of the contents, following the process of the adult learner autonomy;
- f) Spontaneous motivation of students for learning and respect for the communication process that differentiates itself in time and space, encouraging the strengthening of communication between the classroom sessions;

g) Definition of objectives to be achieved with the use of the tool and valuing exercises to deepen learning with the contents articulated with the printed material, and

h) Valuing all pieces of information brought by participants and that were included in the tool.

According to Farfus et al (2007, p.22) two strategies were selected for program assessment. The first is the assessment of the process that monitors the methodology built, its characteristics and the way in which it was developed, trying to identify factors that, during implementation, made its realization easier or more difficult, and allowing to ensure the fulfillment of the project and compliance with the objectives defined within the time periods and budgets agreed upon.

The second strategy is the assessment of results that tries to identify quantitative indicators to complete the accounting report and indicators that enable to substantiate the proposal. This way it is possible to verify that the program has met the proposed objectives that the target audience is considered and to what measure the goals are achieved.

By the end of implementing the pilot program, some indicators reflect the reality experienced. The methodology was systematized with the use of printed material, information technology, and communication – EAD platform. Twenty-nine people completed the qualification and transformed ideas into business plans that were finished and presented during the last module of the program. From those indicators the methodology was substantiated. The strengths identified remained unchanged, for example, classroom sessions held on Saturdays.

Other indicators gathered from classroom sessions and during the monthly meetings to follow up on the business plans were built from the perception of the players involved in the process and allowed to realign the strategies of the Program at the present time and substantiate the methodology.

The methodology for the new editions was reformulated and comprised seven modules:

- I. Presentation of the program and EAD tool;
- II. The individual and the social entrepreneur;
- III. Business Plans;
- IV. Sources of financing and development of social projects;
- V. Finances for Business Plans and social projects;
- VI. Legal aspects for the third sector, and
- VII. Presentation of the Business Plans.

The partnership between SESI-PR and UFSC/FEESC was maintained in the 2007 and 2008 editions with forecast monthly meeting for follow up on and support the implementation of the Business Plans, now included in the Regulation. The idea of following up arose during the implementation of the pilot and today it is considered a differential in the Program and for the social entrepreneurs.

In 2007 a new strategy was developed and added, the impact evaluation that intends to monitor the transformation occurred and to what measure the business plans systematized in the Program are implemented after the qualification execution phase by means of classroom sessions.

After completion of the third edition of the Program, data collected allowed to state that in quantitative terms there was an increase in the number of qualified people and social projects transformed into Business Plans. In 2006, 29 persons were qualified; in the following year, 32 persons. In 2008, 47 entrepreneurs completed qualification.

6 Findings and contributions

The SESI-PR Social Entrepreneurship Program format is similar to the constitution of a Triple Helix like Amaral et al (2009) have expressed. For those authors, one of the main pillars in the Triple Helix model is the institutional integration considered as a spiraling process developed from the reflective negotiations and interactions originated from the overlap.

According to Etzkowitz (2009), those interactions may be more complex, mainly when they include the government. The three jurisdictions and their players develop links and, going beyond, each one takes on the other one's role; universities take on enterprising functions by creating companies such as the foundations for managing contracts with companies (Abdalla et al, 2009) while companies undertake academic activities such as sharing knowledge with others and provide training to their own employees.

Joining specific and facilitating conditions via Innovation announcements from FINEP and the Technological Innovation FINEP Award from the Government; knowledge from the Santa Catarina Federal University; FEESC's technical and managerial capacity; to the intentions and actions of the industry result in the institution of a Social Entrepreneurship Program. By joining governmental incentives, the contributions of entrepreneurship *expertise* from the University, and the industry's pragmatic and collaborative vision through SESI-PR, a methodology was created for the development of technical and human competences for social entrepreneurs.

As a result of the program and the contribution of social entrepreneurs for local and regional development, according to Farfus (2008), the dissemination of the enterprising culture, reduction of social vulnerability, cooperation with other enterprising initiatives, the perspective of long term contribution with the communities served by the social projects developed, development of similar projects to serve other institutions of educational and recreational nature, reduction of vulnerability and others are listed.

Among the competences developed, those that have left and were contacted mention broadening of theoretical knowledge and systematization of social ideas transformed into projects or business plans, the articulation of the relationship network, the pursuit for social solutions, the development of social projects.

The interaction between Industry (SESI) and University (UFSC/FEESC) with government incentive (FINEP) corresponds to the proposal of the Triple Helix by seeking to solve social and economic crises and generating sustainable social efforts. Dissemination of this methodology and results may contribute to the emergence of new proposals for social innovations, to meet existing social needs, and the regional development.

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