Collaboration Networks for Social Innovation: A Case Study in a Technological Incubator of Popular Cooperatives

Márcia Aparecida Prim, Gertrudes Apaarecida Dandoline, Solange Maria da Silva, João Artur de Souza

Abstract

Experiences in social innovation point to a collaborative work, in which several types of players connect in a network to seek solutions to the problems inherent in the less favored population. In this sense, the aim of this paper is to identify the constituent elements of collaboration networks for social innovation in the context of social incubators. This study used a qualitative, descriptive research approach and case study method. Data were collected through document analysis and semi-structured interviews. Based on the thematic analysis of the primary data, it was concluded that the constituent elements of collaboration networks for social innovation in social incubators are: partnerships (networks of players and different types of partnerships); collaboration (mutual help, commitment and trust); self-management (shared leadership, joint decision-making and shared processes); empowerment (recognition and construction of identity); resources (financial, material and human); learning (training, lectures and sharing of experiences); and sustainability (economic, social and environmental).

Keywords: Social Innovation; Collaboration Networks; Social Incubator; Constitutive Elements.

1. Introduction

Since the beginning of the 21st century, the theme Social Innovation (SI) has attracted the attention of government, business and third-sector organizations as a new means of addressing social issues (Phillips, Lee, Ghobadian, & James, 2015; Păunescu, 2014).

This type of innovation is designed to address the most complex social challenges, such as social inequality (concerning education, health, hunger and poverty), climate change, environmental pollution, and worldwide epidemics of chronic diseases, which current structures and policies have not yet prioritized (Bignetti, 2011; Murray, Caulier-Grice & Mulgan, 2010; Schoen, Moreland-Russell, Prewitt & Carothers, 2014; Păunescu, 2014; Hean, Willumsen, Ødegård & Bjørkly, 2015; Salim-Saji & Ellingstd, 2016).

In this sense, SI initiatives foster alternatives to the construction of more egalitarian scenarios, with fairer income distribution and better living conditions for the beneficiary population, besides presenting a concern with environmental sustainability and social development issues. (André & Abreu, 2006).

Aligning local development and economic growth to bring about social transformation becomes the focus of a widespread discussion in universities, social innovation centers, governments, private companies and the third sector (Bignetti, 2011; Morgan, Richardson & Marques, 2018). There are many IS concepts adopted in different contexts, but their concern with meeting social needs, seeking a better quality of life,

and developing collaborative processes, is still latent (Prim, 2017).

To Borges, Santos, Costa, De Aguiar, Dandolini and Souza (2015), SI is created from the combination of existing knowledge in the community itself, involving different playerrs, through a collaborative process, in search of a social change that is sustainable and beneficial to a collective Thus, it is noteworthy that the development of SI is a collaborative work focused on a social demand. Players' participatory work, strategic partnerships with public and private companies, intersectoral collaboration, cooperative work, and collaboration networks are indispensable factors for the development of SI (Murray *et al.*, 2010; Malek & Costa, 2015; Toivonen, 2016). These players integrate to achieve common goals through concerted efforts (Borbinha, 2004) and strengthen themselves when working in networks (Klein, Fontan, Harrisson & Lévesque, 2012).

Network is understood as the set of players connected to achieve a common goal (Castells & Cardoso, 2005). Collaboration networks are characterized as key components for the SI process and their use provides an effective added value (Le Ber & Branzei, 2010; Phillips *et al.*, 2015; Swilling, 2016; Toivonen, 2016). In this sense, to Sanzo, Álvarez, Rey and Garcia (2015), understanding the elements1 of this network is relevant to the study of SI, since collaboration is a determining factor in the creation of new knowledge and new possibilities for the community.

Considering the relevance of the topic and the need for further empirical research on the SI collaboration network (Le Ber & Branzei, 2010; Phillips *et al.*, 2015; Swilling, 2016; Toivonen, 2016), this article aims to identify the constituent elements of the SI collaboration network, in the context of a social incubator.

In this sense, this study presents a scientific contribution from the identification of the necessary elements for the formation of collaboration networks relevant to social innovation, empirically, from a case study, since this is a gap identified in the literature. Another relevant contribution is the extrapolation of the research on the collaboration network, usually applied in the economic environment, to the social environment, through the SI, since few studies focusing on this angle were found in the literature. In addition to this context, the study of SI still needs further study, as publications on this topic have gained volume only from 2006.

2. Theoretical Framework

The theoretical framework presents the main concepts related to social innovation, collaboration networks, and social incubators, which served as the basis for the case study.

2.1 Social Innovation

Innovation, in its original concept, is linked to economic gains on a global business scale (Trott, 2012). In the evolution of its concept, according to the temporal and spatial context, comes an innovation that causes new concepts to emerge with focus on social problems (Bignetti, 2011).

Social innovation (SI) seeks sustainable solutions to today's major challenges, ranging from problems of social inequality (concerning hunger, poverty, health and education) to chronic diseases and other global epidemics (Cajaiba-Santana, 2014; Phillips *et al.*, 2015; Borges *et al.*, 2015).

---

[1] In this study, element is defined as a component that is part of a larger whole. (https://www.sinonimos.com.br/elemento/)

The theme has been expanding in recent decades (Cunha & Benneworth, 2013; Cajaiba-Santana, 2014) and has aroused the interest of several study centers around the world (Păunescu, 2014; Phillips *et al.*, 2015). Its concept still does not find a consensus, considering the several areas of knowledge that approach it (Mulgan, 2006; Bignetti, 2011; Cajaiba-Santana, 2014; Morgan, Richardson & Marques, 2018), such as: infrastructure and urbanism (Swilling, 2016), agricultural production and solidarity economy (Kolk & Lenfant, 2015), health and education sectors (Salim-Saji & Ellingstd, 2016), social movements (Vos & Wagenaar, 2014), among others.

Murray *et al.* (2010) say that SI is associated with new ideas that simultaneously satisfy social needs and create new social relationships or forms of collaboration.

This concept, therefore, presents the presupposition of the creation of new social relations or collaborations, in order to increase society's capacity for action, seeking the satisfaction of its needs. These actions, performed collaboratively, involve various civil society players, which are organized towards a common goal. SI players are individuals, organizations, social movements and the Government (André & Abreu, 2006; Mulgan, 2006; Murray *et al.*, 2010).

Within the perspective of collaborative processes, Borges *et al.* (2015) state that SI is related to the creation of new knowledges, or the combination of them, through a planned, systematic and coordinated process, derived from the collaboration and sharing of knowledge among various agents, aiming at a social change beneficial to a collective, in a sustainable way.

This concept focuses on collaboration between the various players which seek social change for a society as a whole. Borges *et al.* (2015) state that collaboration between these players is a potential factor for the creation of new knowledge and the fostering of social innovations. Neumeier (2012) points out that SI occurs when several players decide to work together and collaboratively, resulting in a tangible improvement for all involved and/or the society.

The players connect in interest groups (Bignetti, 2011; Juliani, D., Juliani, J., Souza & Harger, 2015; Borges *et al.*, 2015) and, when interacting with each other, form a collaboration network (Swilling, 2016; Malek & Costa, 2015; Schoor, Van Lente, Scholtens & Peine, 2016; Hean *et al.*, 2015; Schoen *et al.*, 2014). Partnerships between players contribute to social innovation through the collaboration network, generating greater efficiency in results.

2.2 Collaboration network

Collaboration is a key factor for SI development and can be expanded through networks (Nicolopoulou, Karataş-Özkan, Vas & Nouman, 2015). In this sense, sharing of information, together with exchange of experiences, forms a continuous basis of learning and a collective construction of knowledge (Murray *et al.*, 2010; Nicolopoulou *et al.*, 2015).

To Borbinha (2004), collaboration networks are structures, formed by various players, which connect to achieve common goals, through the conjugation of their respective efforts. When these exchanges occur, relationships, learning, and partnership possibilities emerge (Swilling, 2016; Schoor *et al.*, 2016).

Mance (2002) notes that each networked player, with its specific knowledge, allows integration with the other players, and enables the emergence of complex processes and experiences with previously nonexistent quality.

To Freire and Santos (2016), networked collaborative participation enables the construction of synergy between collaborators. This exchange is a real possibility of creating alternatives and solutions, which individually would not be possible (Swilling, 2016; Schoor *et al.*, 2016; Salim-Saji & Ellingstd, 2016). For Schirmer and Cameron (2012), collaboration networks offer great potential to generate social impact, far beyond what an individual could independently achieve.

From a literature review, it is possible to identify elements that constitute a collaboration network, which are essential for the development of IS. They are:

a) Network of players: created by the diversity of connected players, based on common goals (Swilling, 2016; Malek & Costa, 2015; Salim-Saji & Ellingstd, 2016; Kolk & Lenfant, 2015; Sanzo *et al.*, 2015; Phillips *et al.*, 2015; Păunescu, 2014; Harrisson, Chaari & Comeau-Vallée, 2012; Spena & Chiarra, 2012; Mance, 2002; Bignetti, 2011).

b) Collaboration: collaborative work process, involving the community and members, who learn through cooperation, beginning from a feeling of trust (Nicolopoulou *et al.*, 2015; Swilling, 2016; Schoor *et al.*, 2016; Salim-Saji & Ellingstd, 2016; Kolk & Lenfant, 2015; Hean *et al.*, 2015; Sanzo *et al.*, 2015; Phillips *et al.*, 2015; Manning & Roessler, 2014; Harrisson *et al.*, 2012; Bignetti, 2011; Le Ber & Branzei, 2010; Selsky & Parker, 2010).

c) Commitment: believing in the importance of the established relationship or partnership, forming emotional bonds and lasting ties (Sanzo *et al.*, 2015; Phillips *et al.*, 2015, Bignetti, 2011).

d) Trust: believing in the work of the others and realizing common values and goals in the group (Nicolopoulou *et al.*, 2015, Sanzo *et al.*, 2015; Phillips *et al.*, 2015, Bignetti, 2011).

e) Partnerships: can be intersectoral and interorganizational, through strategic alliances, creating new relationships, with common goals. (Swilling, 2016; Schoor *et al.*, 2016; Salim- Saji & Ellingstd, 2016; Nicolopoulou *et al.*, 2015; Kolk & Lenfant, 2015; Phillips *et al.*, 2015; Sanzo *et al.*, 2015; Kolleck, 2014; Manning & Roessler, 2014; Harrisson *et al.*, 2012; Le Ber & Branzei, 2010; Selsky & Parker, 2010).

f) Leadership: it is indispensable to the process of collective creation, as a leader can guide the players, and the leader's actions provide a collaborative environment. (Swilling, 2016; Schoor *et al.*, 2016; Hean *et al.*, 2015; Manning & Roessler, 2014; Raišienė, 2012; Mcmullen & Adobor 2011).

g) Empowerment: new power relations, and empowering the individuals to perform their activities autonomously (Vos & Wagenaar, 2014; Klein *et al.*, 2012; Sanzo *et al.*, 2015; Bignetti, 2011).

h) Social Incubators and Communities of Social Innovation: new social arrangements as a way of opportunizing social inventions, community governance, and collective power (Toivonen, 2016; Nicolopoulou *et al.*, 2015; West & Hannafin, 2011; Goldenberg, Kamoji, Orton, & Williamson, 2009).

i) Knowledge sharing and transfer: learning process and new knowledge creation (Swilling, 2016; Malek & Costa, 2015; Salim-Saji & Ellingstd, 2016; Kolk & Lenfant, 2015; Sanzo *et al.*, 2015 Phillips *et al.*, 2015; Păunescu, 2014; Harrisson *et al.*, 2012; Spena & Chiarra, 2012; Mance, 2002; Bignetti, 2011).

Terra and Gordon (2002) state that new knowledge emerges through knowledge sharing, interactions and personal relationships, and this is only possible due to the globalized movements of the present world,

where everything is interconnected in the form of networks. It is a process in which new arrangements are possible through the sharing of resources, knowledge and experience (Harrisson *et al.*, 2012). For this study, we adopted the concept by Borbinha (2004) about collaboration network, which was explained for all interviewees.

2.3 Social Incubators

The concept of incubator has historically been applied for economic purposes. Currently, it is recognized as an opportunity to generate innovative solutions in order to solve social problems (Pérezgrovas & Cervantes, 2002). Social incubators are institutions that work collaboratively to meet the demands generated by society, government or academia.

They are considered as essential to social development, since their performance is focused on socially oriented projects. They perform their activities with the help of various areas of knowledge (psychology, administration, sociology, law, accounting, among others) to meet the diversity of social demands (Guimarães, 2000).

The management of incubators establishes an innovation in the way they work. It is a collaborative process, where the interaction between the players is a determining point in the effectiveness and success of the projects. In this sense, Freire and Santos (2016, p. 7) define that "the greater the connectivity between people, the greater will be the understanding of the principles, patterns, relationships and routines, that is, the greater their competence [...] for the sustainable development". Thus, the social incubator proposes a reflection on the concrete alternatives of social, productive and cultural insertion of the workers, as well as a new way of managing its projects.

To Pérezgrovas and Cervantes (2002), the role of social incubators is to support the incubated projects in the various activities they perform: training of beneficiaries, professional training of members, technical assistance regarding project management, and even the mobilization of resources. In this sense, promoting social inclusion, seeking to improve the quality of life of marginalized communities, the production and socialization of knowledge are part of the routine of social incubators (Guimarães, 2000).

In the case of Technological Incubators of Popular Cooperatives (TIPCs), a name initially used in Brazil, it appears that most are linked to universities. In these incubators, SI is correlated to the fact that they work, as a target, with the population in socially vulnerable situations. One of the focus of the TIPCs studies is the generation of work and income, focusing on the concept of solidarity economy, with a view to reducing social inequality and to the fair distribution of resources from the work carried out in the advised projects (Nunes, 2009; Maurer, 2011).

3. Methodology

According to Gil (2008) and Creswell (2007), a research can be classified according to its nature, objectives and means of searching the data. The approach of this study is qualitative in nature, as it seeks a better understanding of the facts investigated. As for the objectives, it is descriptive, since it aims to describe how the phenomenon investigated occurs, and seeks to provide an overview of the approximate type (Gil, 2008). As for the means, this is a case study, carried out at the technological incubator of popular cooperatives

ITCP/FURB, which belongs to the Regional University of Blumenau, in Santa Catarina, Brazil, where the deepening of the context and contact with reality took place.

For data collection we used the semi-structured interview techniques, and the documentary and bibliographic survey. An interview script was elaborated, composed of twenty-four questions, whose objective was to identify, in the interviewees' statements, the constitutive elements of the SI collaboration networks. According to Yin (2005), a semi-structured interview allows, from a pre-elaborated script, an opening for unthought points. The semi-structured interview questions were related to the information that needed to be collected (Yin, 2005). Therefore, the literature review and the objective of this research were considered (Saldaña, 2009).

The thematic analysis (Creswell, 2007) was used for the treatment of the data, based on the theoretical constructs made up from the systematic review of the literature, in dialogue with the data obtained in the empirical survey. The systematic literature review method can be explained as a synthesis of primary studies with clear objectives and methods, carried out through a clear and reproducible methodology (Greenhalgh, 1997).

Table 1. Scientific Production from the Systematic Literature Review

Base	Search Strategy	Retrieved Production	Selected Production
Survey 01 Scopus	TITLE-ABS-KEY "Social Innovation" AND (Collaboration OR Alliance OR Partnership OR Cooperation OR Network*)	116	24 relevant documents
Survey 01 Web of Science	TOPICS "Social Innovation" AND (Collaboration OR Alliance OR Partnership OR Cooperation OR Network*)	80	
Survey02 Scopus	TITLE-ABS-KEY "Social Innovation" AND Incubat*"	4	2 relevant documents
Survey 02 Web of Science	TOPICS "Social Innovation" AND Incubat*"	3	
Total		203	*26*

Source: Prepared by the authors.

As shown in Table 1, the systematic search was carried oud in the Scopus and Web of Science databases. In search criteria 01, 116 documents were found in the Scopus database and 80 in the Web of Science, totaling 196 documents. In search criteria 02, with the constructs "Social Innovation" AND "Incubat*", 4 documents were found in the Scopus database and 3 in the Web of Science, totaling 7 documents. In total, 203 documents were retrieved for analysis. A reading of the abstracts and keywords of all documents was performed, and 26 documents were considered relevant for this research. These articles were used to

support the theoretical part of the research and were the basis for the case study.

In parallel with the literature review, the incubator was contacted and the possibility of carrying out the case study was verified. After the research was approved, the incubator and the selected projects were visited and interviewed.

3.1 Institution Selection

The choice of ITCP / FURB was due to the fact that it is a reference institution in the development of works with social projects, focusing on meeting the needs of excluded and vulnerable people. At the time of this research, ITCP/FURB worked with 10 incubated projects, originated from various sectors of the local economy. After analyzing the documents available for the research and interviewing the coordinator of the incubator, 3 projects were selected for the case study. These projects were chosen because they had characteristics of social innovation, focusing on trying to solve social problems and meet demands from the benefited communities. The projects are: VERBO TECER Project (VTC), ENLOUCRESCER Project (ENLOUC), and COOPERRECIBLU Project (CRECIB), all duly characterized in the results section and identified by their respective acronyms.

3.2 Interviews and form of analysis

Four interviews were conducted, one with the general coordination of ITCP/FURB, and the others with the persons in charge of the three selected social projects. The objective was to seek information from respondents about the constituent elements of the collaboration networks for SI. Each interviewee was given a fictitious name to assure the ethical confidentiality of the survey. The interviews were scheduled and held at the headquarters of the incubator and social projects, in order to know the real work environments. The interviews were conducted in person, according to the respondents' availability, and their speeches were all recorded.

  In addition, field notes considered important for future analysis were made. In total, an average of 40 minutes of recording was performed for each interviewee. All recordings were transcribed in full, resulting in ninety pages of transcriptions. The Informed Consent Form was signed by the four interviewees.

The thematic analysis technique was used for the data processing (Braun & Clarke, 2006). To these authors, thematic analysis is widely used in qualitative studies, as it allows organizing and presenting data synthetically, through the identification, analysis and descriptions of themes and subthemes. These authors indicate six phases, which are described below.

In the first phase, familiarization with the data, after all the material was transcribed and organized, the data was read and reread. It was concluded that all interviews were within the scope of the research, thus constituting the corpus and the data set. According to Braun and Clarke (2006), the transcription process, even being slow, is an excellent way to get acquainted with the contents. At this moment, there is the first contact with the theoretical constructs, built from the literature review in dialogue with the data obtained in the empirical survey.

In the second phase, initial code generation, a manual marking of the latent words or phrases (codes) was defined, in order to discover relevant data and to organize the themes with similar meanings. This process was performed with each interview individually, for further grouping and data analysis. Thus, to illustrate

the procedure, in this step the following questioning was applied: What does the interviewee mean by this sentence? Does this passage or term describe an element of the collaboration network for social innovation? This questioning was necessary as respondents used many synonyms for the initial codes. As an example: collaboration, mutual help, "made by many hands", etc. Each selected theme was written down alongside the interview and the sentence was underlined with different colors.

In the following phases, reanalysis at the broadest level; review of themes; and definition and refinement of the themes, a process of rereading the transcripts was performed, in pursuit of a refinement of the themes. The objective was to identify subthemes and/or transient themes.

In the sixth phase, reporting the results, we presented the final themes and subthemes of the analysis, with the essential data extracted from the interviews, and relating them to the research objective and literature data. Results are presented and discussed in the following section.

4. Results and Discussion

This study explores the context of social incubators in order to identify the constituent elements of SI collaboration networks. Therefore, it is necessary first to present the institution where the case study was applied, as well as to characterize the studied projects. In a second moment, the elements presented in the literature review are retrieved and compared with the elements found in the thematic analysis of the primary data.

4.1 Characterization of the Institution used in the Case Study and its Social Projects

ITCP/FURB is a university extension program created since 1999 to implement work and income alternatives from the perspective of solidarity economy in the region of Blumenau, SC, Brazil. It actively participates in the Brazilian National Network of Technological Incubators of Popular Cooperatives (ITCPs Network). This network was created in 1999 to articulate the actions of networked incubators in the country. The ITCP/FURB program was approved by the Regional University of Blumenau Extension Policy, through the Dean of Research, Graduate, Extension and Culture.

The program has a coordination body, along with a team of teachers, students, and administrative technicians. It carries out its activities based on the principle of collaboration, where it is decided collectively on the actions to be performed in the course of its demands. This is a collective construction, where all members have the right to include matters to be deliberated.

Os trabalhos realizados nos projetos incubados ocorrem por meio de subcomissões específicas, com foco na dimensão educacional (cursos, oficinas, palestras, entre outros); psicossocial (identidade coletiva, organização grupal, motivação, liderança, comunicação e mediação de conflitos); jurídico e contábil (elaboração de leis, estatutos, regimentos, balancetes, entre outros). Além dessas dimensões, as subcomissões fornecem assessoria para a elaboração, produção, comercialização e divulgação dos produtos dos projetos incubados (Marchi, Prim & Andrade, 2013). The works carried out in the incubated projects occur through specific subcommittees, which focus on the educational (courses, workshops, lectures, among others), psychosocial (collective identity, group organization, motivation, leadership, communication, and conflict mediation), and legal and accounting (drafting laws, statutes, bylaws, balance

sheets, among others) dimensions. In addition to these dimensions, the subcommittees provide advice on the preparation, production, marketing and dissemination of products from the incubated projects (Marchi, Prim & Andrade, 2013).

a) COOPERRECIBLU Project (CRECIB): This is a cooperative of solid waste collectors. It is made up of people excluded from society and the formal labor market. It has 60 members. In addition to the solid waste recycling activities, the cooperative also seeks ways to organize and systematize the activities of the solid waste collectors' category, as well as to stimulate and promote the educational improvement of the cooperative members, and enable the achievement of the Brazilian National Solid Waste Policy – PNRS (COINC, 2017). The work generates monthly, on average, a minimum wage, for eight hours of daily effort for each member. The distribution is made in an egalitarian way, within the basic principles of cooperativism. This cooperative also meets the demands of Haitian immigrants, who are marginalized by local society and, however, are looking for job opportunities (COINC, 2017).

b) ENLOUCRESCER Project (ENLOUC): This is the Association of Family Members, Friends and Users of the Mental Health Service of the Municipality of Blumenau. It is a non-profit civil society organization, and was established in 1996 to ensure the rights of people with mental disorders, and its associates are their families, friends and the users of the Psychosocial Care Centers (CAPs). It is made up of 25 members who develop their activities in workshops on handicraft, canvas painting, ceramics, mosaic art, loom, computing, mutual support/the support network, and the theater group "Estações da Vida" (COINC, 2017).

This project presents characteristics of SI because it reinforces the social inclusion, in a positive and productive way, of people with mental disorders. It enables care with psychic problems to be performed in the social environment, involving the community (COINC, 2017). In 2014, it won the recognition award from the Brazilian National Bank for Economic and Social Development (BNDES) for Best Practices in Solidarity Economy, at the Social Cooperative Interaction Fair, at Santa Maria, in the neighboring State of Rio Grande do Sul. It also held the opening of the National Health Congress in 2015 at the Federal University of Santa Catarina (UFSC) (ENLOUC, 2017). ITCP/FURB has become a reference in the production of mental health and solidarity economy incubation methodology, being invited to participate in several national events to publicize its activities (COINC, 2017).

c) VERBO TECER Project (VTC): This is the Blumenau Weaving Association. It was created in 2004 and has nineteen groups of associated artisans. Seventeen of these groups are made up of women, mostly over 50 years old. The Project does not have its own headquarters yet, unlike the other two projects presented and, for this reason, holds its meetings on the ITCP/FURB premises. Its form of management is self-managing through monthly meetings to discuss the project guidelines, with the support of the incubator (VTC, 2017).

The members produce handicrafted food (artisanal and whole cookies) and other types of crafts, mostly extracted from recycled material, such as pieces of textile (fabric), wood, bamboo, and clay wastes. This

production generates work and income for the members, and the money obtained from the commercialization of these products is, for most, a complementary source in the composition of the families' income (COINC, 2017). It is considered an innovative project for its networked dimension of management, production and marketing of products.

All projects advised by ITCP/FURB work with a focus on fair income distribution, collective and collaborative processes, improving the quality of life of members, respecting the environment, and sustainability.

4.2 Elements that make up the collaboration network for social innovation at ITCP/FURB

After rereading the interviews, and applying the technique of thematic analysis of primary data, it was found that all the elements that constitute the collaboration network described in the literature as relevant to the IS were found in the researched projects. In addition to these common elements, new elements emerged and, due to their influence on the social projects studied, they were considered as relevant results for this study. They are: resources, learning, and sustainability.

To better synthesize and associate the elements found in the literature with those identified in the projects (empirical part), some elements were grouped by similarities, such as Players and Partners, represented in the result as "Partners". Another grouping was Commitment and Trust, within "Collaboration". The Process element was also inserted under "Self-management". Table 2 presents these elements.

Table2 - Constituent Elements of the Collaboration Network

ELEMENTS AND SUBTHEMES		
Elements	Subthemes	Characteristics
Partners	1) Networks of players. 2) Types of partnerships.	1) Individuals, government, organizations, social movements, university, incubator, community. 2) Intersectoral and inter-organizational; community-involving actions.
Resources	1) Financial. 2) Material. 3) Humane.	1) Monetary. 2) Equipment, infrastructure, movable property, raw materials. 3) Psychological support, technical advice, training, volunteering.
Collaboration	1) Self-help. 2) Trust and commitment. 3) Interpersonal relationship.	1) Mutual help. 2) Integrity, honesty, bonding. 3) Involvement with the cause.
Self-management	1) Types of leadership. 2) Decision making. 3) Processes.	1) Shared Leadership. 2) Group decisions. 3) Collaborative processes
Learning	1) Training	1) Training, courses, workshops.

	2) Lectures.	2) Lectures
	3) Sharing of Experiences.	3) Meetings, study visits, articulation meetings with partners.
Sustainability	1) Economic.	1) Means of obtaining resources.
	2) Social.	2) Valorization of the individual.
	3) Environmental.	3) Respect for the environment.
Empowerment	1) Recognition. 2) Construction of the identity.	1) Perception of the importance. 2) Personal Achievement.

Source: Elaborated by the authors.

Each of the elements that make up the collaborative network for social innovation at ITCP/FURB is described below:

a) Partners: They are all those who develop some kind of relationship with the projects and make it possible to create a network of players. These players, according to the interviewees, are volunteers, individual supporters, internal collaborators, teachers, public and/or private companies. To the ITCP/FURB Coordination, partners are of paramount importance for the development of incubator activities: "Without partnership it would be impossible to have the work done [...]" (COINC, 2017). Their partnerships are intersectoral when involve more than one sector of society, such as social assistance, health, and education sectors; and inter-organizational, when related to the various organizations that directly or indirectly support the projects, such as Unisol/Abihpec, Cáritas, and Unisol.

The community also has a direct involvement with the projects, given its participation in courses, and in events such as Solidarity Economy Fairs, "Solidarity Road Tolls", "Solidarity Feijoadas", as well as the involvement of suppliers of (recycled) raw materials, and also of customers of the handicraft products made in the projects.

b) Resources: The resources may be of material, financial and/or human origin. Partnerships with players from various sectors (developers and/or beneficiaries) contribute in various ways to the collaboration network. In addition to financial resources, other types of resources may be provided, such as knowledge and information, relationship networking, technologies, teaching new work practices, infrastructure, informal bonds (volunteering), advisory services, therapies, workshops, and medicines offered to members of the ENLOUCRESCER Project. The speech of the project representatives highlights these partnership resources: "They go to the CAPs, hence each one has their own therapy [...] makes treatment [...] gives the medicines [...]" (ENLOUC). "Members use FURB space to make theater and pottery workshop" (ENLOUC).

c) Collaboration: It was found in the projects studied that collaboration is recognized as synonymous with a work done jointly. The speech "performed by several hands" (VTC) expresses this collaborative feeling. There was a major concern among the respondents with the issue mutual help, where everyone seeks to help others, a fact that generates high commitment to the group objectives and greater trust among the project participants. In the engagement with external partners (buyers/

customers), the collaboration factor is little observed. There, a cooperative relationship is recognized, however, more at the commercial and formal level. In this sense, it is concluded that there is more collaboration among the internal project participants than with external partners. Interpersonal relationships are also important for collaboration to occur. "[...] It only became real right now because there was this collaborative network of many people, both from ITCP projects and staff, from the RESVI/FESB2 volunteers [...]" (VTC). To the respondents, the greater the relationships, the higher the levels of commitment and trust.

d) d) Self-management: To the respondents, self-management is the utmost form of leadership. This form of management is present in all projects and indicates the fact that the project management is carried out by the members themselves. All the projects studied have their responsible (supposedly leaders) elected, by vote, for a period of two years.

e) In the studied projects, as well as at ITCP/FURB itself, "decision making is always carried out collectively" (VTC, 2016). Thus, each project has its schedule of meetings and participations in the forums, so that decisions are assertive in favor of the collective. The activities, as well as the processes to be performed, are also collective matters and, as such, are dealt with in assemblies and forums.

The processes carried out in the studied projects are built based on the self-management and participation of all members, and all activities performed must be documented in minutes, balance sheets and attendance lists. This procedure protects the rights of all and is guaranteed by the bylaws and internal rules that support the processes. According to the incubator coordinator's statement, "the group goes on building together" and "everything is recorded in minutes".

The statutes of the three studied projects define that the maximum forum for deliberation are these assemblies and meetings. The administrative boards (composed of president, treasurers, secretaries and fiscal councils) perform the function of enforcing what is collectively decided.

In order to be able to work in this condition of collective participation, these projects are built on the principles of solidarity economy, focusing on teamwork.

It is noteworthy that the projects receive direct advice from ITCP/FURB. In the COOPERRECIBLU project, monthly meetings are held for relevant deliberations. For the (financial) closing of each month, ITCP/FURB supports the cooperative and there is a weekly monitoring by the subcommittee of this project. In the VERBO TECER and ENLOUCRESCER projects, the meetings take place weekly and ITCP/FURB participates to jointly define the strategies to be followed. In this sense, there is a weekly routine of meetings with committees, separated by subject.

ITCP/FURB performs project advisory actions, through committees and subcommittees of work, where responsibilities are divided among teachers, students and technicians. The main activities are: advising, organizing, qualifying, articulating, sharing experiences, managing conflicts, and the incubation of the RESVI/FESB.

f) Learning: Is something that makes possible the improvement of daily activities, through new knowledge. Thus, respondents consider this issue a major alternative for individual, group and

---

2 RESVI/FESB: the Itajaí Valley Solidarity Economy Network/Blumenau Solidarity Economy Forum.

community growth.

In the VERBO TECER and ENLOUCRESCER projects, learning goes beyond seeking new knowledge. It is a process of social reintegration. In the case of the ENLOUCRESCER project, the members learn to make various handicrafts and do cultural activities, which enable them to be inserted again in society, with recognition and dignity. This is totally different from what occurred before ITCP/FURB began to advise the Project, when mental health policy was still weak. The speech of the representative of the project ENLOUCRESCER shows this fact. "Then they go to the Association, learn how to paint, or to make loom, or they will sew [...] I like to sew" (ENLOUC).

Learning takes place through the exchange of experience among all players involved, through training, awareness lectures, and diverse meetings for knowledge sharing.

In the training context, several workshops are offered in the studied projects, such as painting, handicraft, theater, mosaic art, and food (handmade cookies). Awareness has the objective of enabling new visions and adding new knowledge to participants. Other forms of learning used in the projects studied are gatherings and discussion forums. These meetings take place weekly, biweekly or monthly, depending on the topics to be addressed and the project in question. Forums take place monthly.

It is concluded that training, awareness lectures and sharing experiences are essential factors for learning to occur within groups, and for knowledge to be absorbed and disseminated, not only in ITCP/FURB, but among all players involved in the projects.

g) Sustainability: The relationships created between the various ITCP/FURB players pursuit to support the sustainability of the projects. The respondents understand sustainability as the way they seek to survive, focusing on the three pillars: economic, environmental and social. Sustainability was identified as a way of acting without compromising the future of the next generations, as well as without harming the environment. It was a topic that emerged when observing that the projects seek various alternatives to become permanent.

The economic pillar represents the aspect of the project remaining financially active in the market, in addition to the officially signed partnerships with the government and third sector organizations. There is also a constant quest for other partnerships, in search of various resources, provided by initiatives such as the already existing Solidarity Economy Fair, the social currency PILA and the Solidarity Showcase.

Environmental sustainability is the responsibility of not compromising the use of natural resources by future generations, and is present in the essence of the projects analyzed. The CRECIB project is a recycling project that enables the reuse of various materials that would be thrown into the wild, causing negative environment impacts. The VERBO TECER and ENLOUCRESCER projects are concerned with the reuse of materials for the production of their crafts and advise the use of packaging materials that do not degrade nature. For the interviewee from VTC, "sustainability is part of the solidarity economy", and further clarifies that this theme is a concern of the artisans, when says "we ask them to make the reuse of material, or fabric, or paper that degrades in less time in the environment "(VTC).

Social sustainability is represented in the three projects analyzed, as well as in the work done by

ITCP/FURB, as it represents focus on the respect and quality of life of the members and, consequently, of the community. It also represents a concern with the reintegration of individuals, enabling them to interact again with society.

The ENLOUCRESCER project manifests this appreciation of the human beings when reinserting into society individuals with some degree of special need, in a respectful and productive way. This is also perceived in the VERBO TECER project, by its reentering "senior" women into the job market through a craft production chain. The CRECIB Project values the living conditions of human beings by giving them a job opportunity. This proves the concern to take care of human beings and make them interact with the world around them.

h) Empowerment: Empowerment was an element seen in the literature that also emerged from the interviews. It is observed that the construction of identity and individual recognition are relevant aspects for the empowerment of individuals and, consequently, of the community in which they are inserted. Personal fulfillment is linked to the fact that one likes what he/she is doing, and it is built individually or in groups, such as in the VERBO TECER project, where the interviewee states that "the artisans are in the project because they are passionate about crafts"

In all projects, the construction of identity was observed as a positive point by the interviewees, especially in the ENLOUCRESCER project, where the need to rebuild oneself as a human being is quite evident. In this project, the creation of an own logo by each member was a fully participative and important moment, since it generated a strong sense of belonging to the collective by the members.

Individual recognition is perceived by the recognition and appreciation of the individual's achievements. The projects try out travel possibilities to present members' works, and also for them to earn financial resources, resulting from the sales of their crafts.

The recognition also occurs due to the work of ITCP/FURB: the institution was publicly honored by the Legislative Assembly of the State of Santa Catarina in 2014.

All of these interconnected elements form a collaborative network that fosters social innovation actions, with the purpose of bringing about change in the communities involved.

5. Conclusions and Recommendations

This article aimed to identify the constituent elements of the collaboration network for social innovation, in the context of social incubators. To accomplish it, a systematic literature review and a case study at ITCP/FURB were performed. Working from the perspective of social incubators, it was observed that collaboration networks are important in the development and creation of SI, as they point to new social, economic, financial, cultural and political arrangements.

In addition to the perception that a collaboration network provides opportunities for growth through participatory work and sharing of knowledge of the community involved in the social problems, from the interviews with the respondents to our survey it is clear that they understand that they do not have all the knowledge necessary for collective construction, and the "fact of working collaboratively makes the whole group grow "(VTC).

In this case study, it is concluded that ITCP/FURB represents a SI, for its way of working through collaborative and inclusive processes, as well as for its way of advising incubated projects, since there knowledge is always built on a two-way street between the academic and the popular.

As a main result of this paper, it is concluded that the various elements presented as constitutive of the collaboration network are: partners (network of players and types of partnerships), collaboration (commitment, trust and mutual help), self-management (shared leadership, decision making, and collaborative processes), empowerment (recognition and identity building), resources (financial, material and human), learning (training, lectures and sharing of experiences)   and sustainability (economic, social and environmental).

The empirical study indicated that the relationships established and cultivated between these elements of the collaboration network favored the development of SI initiatives. This is a reciprocal movement, as the collaboration network drives SI, and SI, in turn, creates new forms and models of collaborative work.

It is observed that it is through the collaboration network that social changes actually occur, and understanding the relationship established between these elements is not a trivial process. It is a highly collaborative process, where the interaction between members is a determining point in the effectiveness and success of the work. In this sense, the collaboration network formed by the projects, the incubator and the partners creates strong bonds and lasting ties.

This paper presents two scientific contributions: the identification of the constitutive elements of collaboration networks for social innovation, in an empirical way; and the extrapolation of the study on the collaboration network – normally applied to the economic environment – to the social environment, since few studies focusing on the social angle were found in the literature.

That said, it is clear that the study of SI still needs deepening, given that it is a relatively new subject for the academia, especially the research supported by empirical data. Because its concept is multidisciplinary, there are several areas of knowledge that may be involved in its development.

Regarding the theme of SI collaboration network, few studies have been found, thus being a vast field of opportunities for future research, especially on the validation of these elements in other forms of organizations with social purposes.

6. Acknowledgement

7. References

André, I., & Abreu, A. (2001). Dimensões e espaços da inovação social. *Finisterra*, Lisboa, 41(81), pp. 121–141.

Bignetti, L.P. (2011). As inovações sociais: uma incursão por ideias, tendências e focos de pesquisa. *Ciências Sociais Unisinos*, São Leopoldo, 47(1), pp. 3-14.

Borbinha, J. (2004). Redes de colaboração: alguns elementos para análise e reflexão. *Caderno de Biblioteconomia Arquivística Documentação*. Lisboa, 1, pp. 73-88.

Borges, M.A., Santos, D.A., Costa, L.A., Aguiar, R.R.S., Dandolini, G.A., & Souza, J.A. (2015). Inovação Social: uma gênese a partir da visão sistêmica e teoria da ação comunicativa de Habermas. *Fourth International Conference on Integration of Design, Engineering and Management for innovation*. Florianópolis.

Braun, V., & Clarke V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), pp. 77-101.

Cajaiba-Santana, G. (2014). Social innovation: Moving the field forward. A conceptual framework. *Technological Forecasting and Social Change*, 82, pp. 42–51.

Castells, M., & Cardoso, G. (2005). A Sociedade em Rede: do conhecimento à ação política; *Conferência*. Belém (Por): Imprensa Nacional.

Creswell, J.W. (2007). *Projeto de Pesquisa: métodos qualitativos, quantitativo e misto*. 2. Ed. Porto Alegre: Artmed.

Cunha, J., & Benneworth, P. (2013). Universities' contributions to social innovation: towards a theoretical framework. *University of Twente, School of Management and Governance* - IGS, pp. 1–31.

Freire, P.S., & Santos, S.M. (2016). Modelos de Gestão Organizacional para a Sustentabilidade, da participação à colaboração. In: J. R, A. Philippi, C. A. C. Sampaio, & V. Fernandes. *Gestão Empresarial e Sustentabilidade*. São Paulo, Ed. Manole. pp. 620 - 637.

Gil, A. C. (2008). *Como elaborar projetos de pesquisa*. (5. Ed.). São Paulo: Atlas.

Goldenberg, M.W., Kamoji, Orton, L., & Williamson, M. (2009). Social Innovation in Canada: an Update. [s.l.]. *Canadian Policy Research Networks*. Retrieved December, 13.

Greenhalgh, T. (1997). Papers that summarise other papers: systematic reviews and meta- analyses. *British Medical Journal*, 315(7109), pp. 672.

Guimarães, G. (2000). *Incubadoras tecnológicas de cooperativas populares: contribuição para um modelo alternativo de geração de trabalho e renda*. In: Singer, P and AR De Souza. (Org.). A economia solidária no Brasil: a autogestão como resposta ao desemprego. São Paulo: Contexto, pp. 111- 122.

Harrisson, D.N., Chaari, M., & Comeau-Vallée, V. (2012). Intersectoral Allianceand Social Innovation: When Corporations Meet Civil Society. *Annals of Public and Cooperative Economics*, 83(1), pp. 1– 24.

Hean, S., Willumsen, E., Ødegård, A., & Bjørkly, S. (2015). Using Social Innovation as a Theoretical Framework to Guide Future Thinking on Facilitating Collaboration between Mental Health and Criminal Justice Services, *International Journal of Forensic Mental Health*, 14(4), pp. 280-289.

Juliani, D.P., Juliani, J.P., Souza, J.A., & Harger, E.M. (2014). Inovação Social: perspectivas e desafios. *Espacios,* 35(5). pp.23

Klein, J.L., Fontan, J.M., Harrisson, D., & Lévesque, B. (2012). The Quebec System Of Social Innovation. A Focused Analysis on the Local Development Field. *Finisterra*, XLVII, 94, pp. 9-28.

Kolleck, N. (2014). Innovations through networks: understanding the role of social relations for educational innovations. *Zeitschrift für Erziehungswissenschaft*, 17(5), pp. 47–64.

Kolk, A., & Lenfant, F. (2015). Cross-sector collaboration, institutional gaps, and fragility: The role of social innovation partnerships in a conflict-affected region. *Journal of Public Policy and Marketing*, 34(2), pp. 287-303.

Le Ber, M.J., & Branzei, O. (2010). (Re)Forming Strategic Cross-Sector Partnerships: Relational Processes of Social. *Innovation Business and Society*, 49(1), pp. 140-172.

Malek, A., & Costa, C. (2015). Integrating Communities into Tourism Planning Through Social Innovation. *Tourism Planning and Development*, 12(3), pp. 281-299.

Mance, E.A. (2002). *Redes de Colaboração solidária: aspectos econômicos-filosóficos: complexidade e libertação*. Petrópolis. RJ: Vozes.

Manning, S., & Roessler, D. (2014). The Formation of Cross-Sector Development Partnerships: How Bridging Agents Shape Project Agendas and Longer-Term Alliance. *Journal of Business Ethics*, 123, pp. 527–547.

Marchi, R.C, Prim, L.F., & Andrade, E.T. (2013). *Economia Solidária na ITCP/FURB: Reflexões e experiências em busca da inclusão social*. Blumenau. SC, Meta.

Maurer, A.M. (2011). *As Dimensões de Inovação Social em Empreendimentos Econômicos Solidários do Setor de Artesanto Gaúcho* (Dissertação de Mestrado), Universidade Federal do Rio Grande do Sul, Porto Alegre.

Mcmullen, R.S & Adobor, H. (2011). Bridge leadership: a case study of leadership in a bridging organization. *Leadership and Organization Development Journal*, 32(7), pp. 715– 735.

Morgan, K., Richardson, R., & Marques, P. (2018). Social innovation in question: The theoretical and practical implications of a contested concept. Environment and Planning C: *Politics and Space*, 36(3), pp. 496-512.

Mulgan, G. (2006). The Process of Social Innovation. Innovations – technology, *governance, globalization,* 1(2), spring.

Murray, R., Caulier-Grice, J., & Mulgan, G. (2010). *The open book of social innovation*. London: The Young Foundation.

Neumeier, S. (2012). Why do Social Innovations in Rural Development Matter and Should They be Considered More Seriously in Rural Development Research? - Proposal for a Stronger Focus on Social Innovations in Rural Development Research. *Sociologia Ruralis*, 52(1), pp. 48–69.

Nicolopoulou, K., Karataş-Özkan, M., Vas, C., & Nouman, M. (2015). An incubation perspective on social innovation: the London Hub – a social incubator. *RD Management*.

Nunes, D. (2009). *Incubação de Empreendimentos de Economia Solidária: uma aplicação da pedagogia da participação*. São Paulo: Annablume.

Păunescu, C. (2014). Current trends in social innovation research: Social capital, corporate social responsibility, impact measurement. *Management and Marketing*, 9(2), pp. 105-118.

Pérezgrovas, V., & Cervantes, E. (2002). Evaluación de los benefícios actuales y el potencial para el combate a la pobreza de la participación en redes de comercio justo de café en la Unión Majomut. Colorado State University. *Fair Trade Research Group* - FTRG. San Cristóbal de las Casas, Chiapas, 06, pp. 1-26.

Phillips, W., Lee, H., Ghobadian, A. & James, P. (2015). Social Innovation and Social Entrepreneurship: A Systematic Review. *Group and Organization Management*, 40(30).

Prim, M.A. (2017). *Elementos constitutivos das redes de colaboração para inovação social no contexto de incubadoras sociais* (Dissertação de mestrado), Universidade Federal de Santa Catarina,

Florianópolis, Santa Catarina.

Raišiene, A.G. (2012). Sustainable development of inter-organizational relationships and social innovations. *Journal of Security and Sustainability*, 2, pp. 65-76.

Saldaña, J. (2009). The coding manual for qualitative researchers. *London*: Sage.

Salim-Saji, B., & Ellingstad, P. (2016). Social innovation model for business performance and innovation, *International Journal of Productivity and Performance Managemen*, 65(2).

Sanzo, M.J., LI Álvarez, L. I., Rey, M., & Garcia, N. (2015). Business-nonprofit partnerships: a new form of collaboration in a corporate responsibility and social innovation context. *Service Business*, pp. 1–26.

Schirmer, H & Cameron (2012). Partnership Steering Wheels: How the Formation Process of a Cross-sector Partnership can influence its Governace Mechanisms. *The Journal of corporate Citizenship*, Issue 50, pp. 23-45.

Schoen, M.W., Moreland-Russell, S., Prewitt, K., & Carothers, B. (2014). Social network analysis of public health programs to measure partnership. *Social Science and Medicine*, 123, pp. 90–95.

Schoor, T.V.T., Van Lente, H., Scholtens, H.B., & Peine, A. (2016). Challenging obduracy: How local communities transform the energy system. *Energy Reserch and Social Science* 13, pp. 94-105.

Selsky, J.W., & Parker, B. (2010). Platforms for Cross-Sector Social Partnerships: Prospective Sensemaking Devices for Social Benefit. *Journal of Business Ethics*. 94, pp. 21–37.

Spena, T.R., & Chiara, A. (2012). CSR, innovation strategy and supply chain management: toward an integrated perspective. *International Journal of Technology Management*, 58(1/2), pp. 83-108.

Swilling, M. (2016). Africa's game changers and the catalysts of social and system innovation. *Ecology and Society*, 21(1), 37.

Terra, J.C.C., & Gordon, C. (2002). Portais corporativos: a revolução do conhecimento. São Paulo: Negócio Editora.

Toivonen, T. (2016). What is the Social Innovation Community? Conceptualizing an Emergent Collaborative Organization. J*ournal of Social Entrepreneurship,* pp. 49-73.

Trott, P. (2012). *Gestão da inovação e desenvolvimento de novos produtos*. 4 ed. Porto Alegre: Bookman.

Vos, J., & Wagenaar, H. (2014). The Munchhausen Movement: Improving the Coordination of Social Services through the Creation of a Social Movement. *The American Review of Public Administration*, 44(4), pp. 409–439.

West, R.E., & Hannafin, M. J, (2011). Learning to design collaboratively: Participation of student designers in a Community of Innovation. *Instructional Science*. 39, pp. 821–841.

Yin, R.K. (2005). *Estudo de caso: planejamento e métodos*. [trad.] Daniel Grassi. 3 ed. Porto Alegre: Bookman.