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Inter-organizational Learning: A study of small-firm networks in Southern Brazil

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This article intends to deepen the understanding about the factors that moderate the learning in horizontal small-firm networks (SFNs). Through a qualitative study with interpretative epistemological approach, in-depth interviews were made with eight entrepreneurs of SFNs in Southern Brazil. The results show that the effective participation of the entrepreneurs in network activities is essential for the learning to take place. Elements such as the lack of rivalry in the group, sharing of goals and a conflict-free environment, matched with the willingness and sincerity of entrepreneurs to learn, were also reflected. The repeated interaction of a same set of firms can lead to exhaustion of the learning potential, with influence on the motivation of participants and the maintaining of the cooperative relationship. Managers have to find ways to avoid the depletion of the group learning potential, through the admission of new participants. This article innovates by addressing in an integrated manner on a number of factors that affect learning in SFNs.

Key words: Cooperation, horizontal small-firm networks, business networks, inter-organizational learning, socio-cultural perspective.

INTRODUCTION

The potential for learning provided by interorganizational cooperative arrangements has been the subject of academic studies, concerned to better understand the phenomenon and its implications for arranging and participating organizations. According to Holmqvist (2003), the contact with other organizations is essential to produce a variety of experiences, through experimentation, innovation and also acceptance of the risks that it provides. This learning serves as a complement to intra-organizational learning, focused on the search for yield, routine, refinement and elaboration of existing experiences, but that can also lead the firm to a limited vision and loss of opportunities.

This study aims to deepen the understanding about the process of inter-organizational learning (IOL) that occurs in horizontal small-firm networks, from the perspective of

entrepreneurs that compose them. Horizontal networks of firms are one of several inter-organizational formats (Todeva, 2006) and they are usually composed of small and midsize firms in the same activity sector, with lack of resources and skills, working toward maintenance or increase of their market competitiveness. Each member maintains its individuality, by participating directly in the decisions and dividing symmetrically benefits that are achieved through joint activities (Verschoore, 2004).

The article presents a review of theoretical perspectives on organizational learning (OL), giving emphasis to addressing socio-cultural lens to the development of the study. Entrepreneurs of two networks of building material retailers operating in Southern Brazil were interviewed and it was found that a number of factors act as moderator in the process of IOL. The results highlight the role of entrepreneurs' participation in group activities so that the learning actually takes place and the role of learning as motivating for the continuity of the cooperation in networks of small-firms, with interesting theoretical and practical implications.

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LEARNING: LEVELS AND PERSPECTIVES

In the literature on OL identifies a predominance of studies that consider the individual and organizational levels, giving priority to the transfer of knowledge from the individual to the organization, without much consideration about the group level role. There is a huge gap, therefore, that may be considered in future studies: the group level (teams, units and sub-cultures) and enlarge the scope to examine the different businessmen at the different levels of analysis, including processes that go beyond organizational boundaries (inter-organizational learning).

The IOL is the one that occurs in the context of groups of organizations that cooperate proactively. Knight (2002) argues that this notion can be drawn from different approaches, such as: (a) The appropriation of learning by individual organizations - what each one can learn from others or from the interaction between them (inter-organizational learning), (b) the learning that is institutionalized by the behavior modification of the alliance, which can be understood as learning by the group of firms - learning of network (network learning), (c) or still the networks created with the sole purpose of generating learning for their members (learning networks).

Relating the learning process with the individual who is learning, Knight (2002) suggests that IOL refers to individuals, groups and organizations learning in a context of inter-organizational relationship. On the other hand, the network learning can be characterized by modifications in properties at the network level and not being simply the sum of learning of individuals and organizations that make up the network (Knight and Pye, 2005). The present study deals with the first type of learning that is when organizations in inter-organizational networks exchange knowledge and generate learning.

Apart from discussions about levels of learning the management literature uses different perspectives to understand and analyze the subject from the psychological viewpoint (Maier et al., 2001), economic theory (Boerner et al., 2001), an anthropological outlook (Czarniawska, 2001) and the socio-cultural learning perspective (Strati, 1998; Gherardi and Nicolini, 2001).

This later values the notions of participation and reflexivity. The concept of participation highlights the fact that learning happens not only or mainly in the minds of individuals but from the participation of individuals in social activities. Based on a micro-interaction approach, learning is related to the process of becoming a member of a community, because social relations are important for the transmission of knowledge and the development of identity (Gherardi and Nicolini, 2001). That is, learning is always situated in the sphere of social interaction, share of norms, values, identities and meanings by a group of individuals.

The problem with some perspectives adopted to investigate OL's is that despite being based on learning

models that theorize about the individual and/or social dynamics articulated to daily practices, they end up underestimating the complexity of this dynamic. For this reason, contemporary theories of OL tend to change their focus from individualism to the prospects of social learning (Sawchuk, 2003), from acquisitions to conceptions based on practice (Hager, 2004) and from an atomistic analysis to the systemic analysis that also respond for the micro-interactions that occur within the activity (Engeström, 2001).

Even studies claiming that a procedural approach must be considered to study learning in organizations do not examine the nature of learning as a flow. For the social complexity of learning it has just been proposed to associate some insights that are emerging from such analysis (Fenwick, 2002; Antonacopoulos and Chiva, 2005; Antonacopoulos, 2006) and the socio-cultural approach is beginning to shed light on some of the neglected dimensions of learning in the context of work in organizations. Learning is understood as the emergence of relations and interactions of people with the social and material elements of personal contexts. Thus, context is considered as such by its divisions of work and its relations of power, environment, culture, language and identity among others.

This study takes the socio-cultural perspective as lens, precisely because of the characteristics of business networks. Such organizational structures depend to a large extent on the interaction of their participants and their ability to share resources, knowledge and experiences, generating synergistic results. And it is from this interaction and these relations among the participants that the IOL is possible and its effects can be seen in the organizations that make the networks.

LEARNING IN BUSINESS NETWORKS

Child (2001) noted that, the exchange and acquisition of knowledge may be desirable by-products of the collaboration, even in those alliances and collaborative arrangements that are not created with the specific intention of acquiring new knowledge. Inkpen (1996) reinforces that alliances create unique learning opportunities for the participating firms, as of complementary skills and capabilities of the cooperating firms, stimulated by the approaching of professionals with different bases of knowledge. However, the kind of learning that may be generated depends on the purpose, involvement and needs of the partners, determining the level and scope of knowledge that can be transferred among the participants: technical, systemic and strategic knowledge.

Child (2001) compares the technical level to the single loop or learning routines of Argyris and Schön (1978). But the systemic level of knowledge belongs to the organizational systems and procedures. The focus is on a kind of integrative learning that involves the restructuring of

relationships and creation of new rules, similar to the double-loop learning (Argyris and Schön, 1978). Finally, the strategic level refers to the construction and sharing of meanings by the managers and involves reflective processes that generate new insights and promote strategic proactivity.

Both Ceglie and Dini (1999) and Child (2001) warned that the cooperative alliance develops itself as a relationship over the time. It evolves from an initial contact, through negotiations and interactions, to a phase of cooperation managed. The development may lead to expansion of the cooperation or even to the decision to break the alliance. The expansion and deepening of cooperation are based in part on learning how to work together and gain synergies between complementary skills. This is a joint learning about how to manage cooperation and make it the best advantage.

The early stages of cooperation learning tend to be limited to technical aspects, not involving systemic or strategic issues. The interaction and expansion of contacts, combined with a number of factors to be discussed later, tends to impact on levels of learning. In this perspective of time and interaction, it is believed that the consolidation of the network will be accompanied by an advancement of learning to strategic levels. Although, the network lifetime is not a sufficient condition to ensure higher levels of learning, the maturing of the cooperative relationship contributes significantly to the participants and can pass from the basic information exchange to others more strategic and even from changing of values and identity.

MODERATING ELEMENTS OF LEARNING IN BUSINESS NETWORKS

Some elements highlighted below act as moderators in promoting IOL (Child, 2001; Inkpen, 1996), influencing the need and the willingness of the firms in seeking new knowledge, as well as distinguishing the inter-relationships environment where the learning happens.

Elements of the whole context

Pressure of the business environment

A dynamic competitive environment with more competitors and/or strong market competition may encourage firms to pursue learning in alliances (Podolny and Page, 1998). Strong ties among firms of a network are valuable to facilitate the efforts of organizations to adapt their core characteristic in response to environmental changes. The imitation itself within the network can be a form of learning to circumvent the changes imposed by the competitive environment (Kraatz, 1998).

Competition for the same market

Business networks composed by partners who do not compete for the same customer base tend to form more propitious surroundings for learning. In opposition, the existence of rivalry among partners impacts directly on the internal environment and on the possibility of failure of the initiative (Park and Ungson, 2001). The entrepreneurs' perception that the shared information and knowledge will not be used by their partners in a detrimental way to their own firm causes increase the willingness to learn and to share their knowledge.

Elements on business network level

Trust level/quality of relationship among entrepreneurs

This element is very important to determine the reach of cooperation (Floren and Tell, 2004) and to be able to obtain high levels of learning in business networks. "Trust is a sequential process and is being established as the participants meet each other and exchange information and ideas" (Lima et al., 2004). However, Floren and Tell (2004) warn that after the participants work together for a long period of time, there is a risk that the network reaches a point where people know each other so much that learning can be blocked. When the network is closed and no new participants are joining in it, there may be limitations on learning over time.

Power relations

Although the horizontal business networks are formed out of guiding principles that seek to maintain the balance of power in relations among the participants (Verschoore, 2004), it is inevitable that there is asymmetry of power within the group, affecting relationships and willingness to share information. The power dynamic will determine which ideas will be brought to the discussion (Lotia, 2004). Learning in cooperative relations is product of the social and political interaction between the organizations participating in the collaboration. Elements such as the relations between participants and the power that naturally emerges out of these relationships are characteristic of the socio-cultural learning (Strati, 1998; Gherardi and Nicolini, 2001).

Control mechanisms

Child (2001) argues that the existence of controls may be positive and facilitate learning, because they set limits on the actions of the participants in the learning process and allow the evaluation of results. Evaluating can ensure that knowledge was really incorporated into the memory of

the organization and that the learning process was effective. Control is commonly perceived in a negative way, since learning is often associated with autonomy and creativity. In the case of cooperative alliances, however, lack of control may let the participants focus on their particular goals and not on the network ones (Child, 2001).

Mechanisms of information/communication

The existence of mechanisms, enabling access to information, may influence the organizational learning. Child (2001) refers to the idea of availability and redundancy of information - an intentional overlap that facilitates the circulation of knowledge. This means that information is available even to those who may not be interested in using them right away. There is the necessity to add that information technology makes it possible to store much information and allow its movement with greater ease.

Existence of shared goals

Common goals contribute to create an environment that fosters learning. Khanna et al. (1998) point out that one reason for the disappointment of many firms with strategic alliances is the lack of understanding about the dynamics of relationships. Goals, initially common, may, in the course of time, lose part of their sense and therefore reduce the concern of one or another to cooperate. Power relations should also be understood as influencing the alignment or even the misalignment of goals in business networks (Lotia, 2004). As a result of the imbalance of power that affects the proper alignment of goals and the quality of relationships, the learning processes may be impaired.

Elements on participating firms' level

Complementary knowledge

Relational gains are possible when alliance partners combine exchange or invest in assets, knowledge and idiosyncratic resources (Dyer and Singh, 1998), generating synergies. The existence of complementary knowledge encourages entrepreneurs to interchange and to learn. When complementarities are limited or knowledge overlap, the learning opportunities are smaller. It is important to remember, however, that the continuous interaction may in itself lead to depletion of the differences that constitute an advantage for participants (Floren and Tell, 2004). Incorporating complementary knowledge to knowledge to those already exists in the group may be crucial for the cooperative relationship.

Predisposition of participants in learning

According to Hamel (1991), some firms join an alliance

with greater receptivity to learn than others. This refers both to demonstrations of interest in learning by the firm managers as also to the personal ability of the individuals involved in cooperation in proving themselves receptive. As Floren and Tell (2004) affirm: It is essential that the businessmen are open to new and different perspectives brought by others, to allow learning occurs.

The moderating elements of learning in inter-organizational networks are represented in Figure 1, but do not exhaust the discussion. Each network has its peculiarities depending on its environment, the characteristics of the participants and how it was structured. Moreover, the elements themselves are interrelated and influence each other, changing continuously as the cooperative relationship changes.

RESEARCH METHODOLOGY

This study was developed from an epistemological perspective characterized by Merriam (1998) as interpretative, seeking to understand the experience of IOL from the point of view of the entrepreneurs composing the business networks. The study is characterized as a generic qualitative research; "conducted in order to discover or understand a phenomenon, a process, or the perspectives and worldviews of those involved" (Merriam, 1998) and the results are a mix of description and analysis.

Qualitative studies tend to use non-probabilistic samples, since they are not meant to generalize results. These studies seek to solve qualitative problems, as how to find out what occurs, how it occurs and the relationships among these occurrences (Merriam, 1998). The sample is determined in order to maximize the information so as to understand the existing problematic situation. As object of study were selected two horizontal networks of small building materials retailers located in the South of Brazil, named Rede Construir and Redemac. Both networks exist for more than five years and are reference in their segment, and are also seeking to consolidate in the market, reasons that contributed to their choice by this study.

The variables that guided the empirical study are the moderating elements of learning in inter-organizational networks (Figure 1) divided into elements of overall context, at the network level and at the participating firm's level. Data collection was conducted through semi-structured interviews in the first half of 2008, with four businessmen from each of the two selected business networks. The option to realize interviews is due to the flexibility of the technique, which allows the interviewer to clarify questions, to develop them differently and specify their meanings (Colin and Knobel, 2008), meeting the needs of standard qualitative studies. The interviews – which lasted between 45 and 90 minutes - were recorded, transcribed and are presented and analyzed in the following sections of this study.

INTER-ORGANIZATIONAL LEARNING: THE CASES OF REDEMAC AND REDE CONSTRUIR

This section provides general information and the history of the two studied firms networks. Excerpts from interviews with the entrepreneurs are also described, highlighting the aspects of learning in inter-organizational networks.

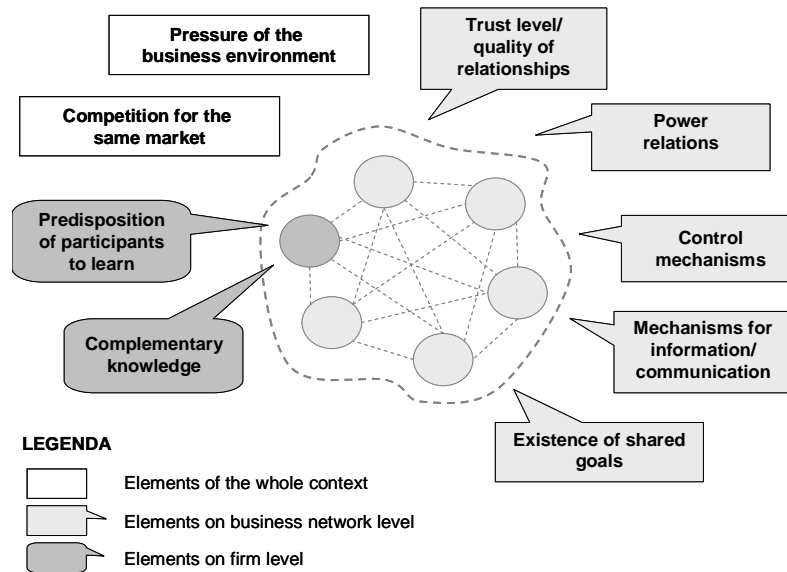


Figure 1. Elements moderators of learning in inter-organizational networks. Source: Authors' proposition.

Table 1. Researched firms – Redemac members.

Firm headquarter (City)	Subsidiary	Number of employees	Firm established since	Network member since
Venâncio Aires	4	31	1978	2002
Santa Cruz do Sul	0	16	1944	2002
Candelária	2	18	1997	2002
Vera Cruz	0	15	1998	2004

Redemac

Redemac was established late 1999 from the association of eleven building material retailers. The business network counts currently with 46 associated firms and more than 70 stores. The businessmen themselves operate the network management, with help of ten professionals. In addition, seven work teams formed by associated entrepreneurs define the actions to be implemented. In-depth interviews were carried out with entrepreneurs from four firms linked to Redemac, as shown in Table 1.

One of the interviewed businessmen performs tasks in the network since his firm joined it and emphasizes participation as an essential aspect to make it possible to obtain advantages with the network. (...) "Participation as a member of the network is a school". This businessman points out that the most important moments of learning are the visits to stores, participation in teams and in the board of the association. Another participant believes that participation in the teams is essential, "The one who does not participate get only half of the benefits that the network

can provide. (...) He will only get the monetary benefits". On the other side, one of the entrepreneurs tells that he already participated in the management activities of the network, but currently holds no function due to the difficulties to conciliate the management of his firm and also participate actively in the network. In his opinion, participation in the teams "is valid, but it is also very bureaucratic. They complain that I do not go [to the meetings], but go there to do what? (...) The team system is good for those who are close to the headquarters, but for those who are far from them, it is complicated". The fourth interviewed entrepreneur joined the network recently. He believes that "the participation creates closer relations [with other members]. Without being part of the teams (...) it is a bit more difficult to go in some partner's stores and they tell you everything you want to know and it is embarrassing to ask for information. "

Rede Construir

The Rede Construir is an association of independent

Table 2. Researched firms – Rede Construir members.

Firm headquarter (City)	Subsidiary	Number of employees	Firm established since	Network member since
Santa Cruz do Sul	0	21	1989	2003
Venâncio Aires	0	10	1977	2005
Santa Cruz do Sul	0	13	1991	2003
Taquari	0	8	1955	2003

building material retailers founded in 1997 and is currently present in seven Brazilian states. In Southern of Brazil, the network was established in 2000 and has currently 36 members. Contract employees and support of a business consultant form the network management. In addition, the firms' managers are encouraged to participate in management teams, but there are no clear rules of obligation. As a network affiliate said, "entrepreneurs are included in the teams, but this is no guarantee that they will participate." In his opinion many of them are just associates, but they have practically no participation in the network management. In-depth interviews were carried out with entrepreneurs from four firms linked to the Rede Construir, as shown in Table 2.

There are significant differences in terms of each businessmen participation in the activities and network management. One of the businessmen said that "the network is only valid for those who intensively participate. (...) There are things that you only get exchanging ideas with colleagues when chatting with them. I would say that the strategic issues are learned that way". As to the development of learning offered by the participation in the network, the businessman commented "when you enter the network, you get a great learning experience with the colleagues. It is a big jump at first, but then comes a point where there's not so much learning anymore. You reach a point where the incoming of new people, new intellectual capital, would be needed".

Another interviewed businessman has presently no activity in the network. Although "he admits that participation in network activities may generate benefits such as learning, he argues that it must be evaluated whether there is time to participate". One of the interviewed entrepreneurs even participated in the activities of negotiation with suppliers, but in the latest years he was no more directly involved with the management of the network. His argument is that, although there may be some gain by involvement in teams, it is difficult to assess whether this compensates for his absence from his firm. At the time when this interview was conducted, his firm had already requested its disaffiliation from the Rede Construir, because "the entrepreneur expectation in relation to the network changes over time".

Another interviewed businessman participates in the network negotiating team. The study points out that "there are those who say they do not want to spend a day

attending their firm to go to the networks meetings. (...) But one of the network advantages is to exchange knowledge and information. No one can measure this value".

Moderating elements of learning in business networks

The following subsections present the moderating elements of learning extracted from the literature and also plus with empirical evidence and commentaries of interviews with entrepreneurs of business networks.

Pressure of the business environment

Redemac: The managers emphasized the high competition in the segment of building materials, through the increase of the number of competitors and incoming of international groups. "Without the business network it is difficult to defend oneself; the competition is very hard." The high competitiveness makes the firms eager to learn within the group. As it was told by an entrepreneur: "Playing the game alone is difficult. (...) No way we could win without the knowledge that we obtained in the network". The business network also serves as a stimulus for the shops: Seeing colleagues expanding and developing themselves encourage others to do the same, and thus stay ahead of the competitors.

Rede Construir: One of the interviewed entrepreneur declared that the sector remains very competitive and the differential offered is quickly copied. "You have to be in front of them. Today I feel stronger because I'm in the network, I have more information, and through the network I improved my shop, the management and the organization". Another manager also pointed out that "the network gives support to make changes, [shows] the way to change, but it depends on the entrepreneur doing it or not."

The entrepreneurs noted that the network is seen as a space for learning and obtaining knowledge, and the very understanding of the environment dynamics encourages entrepreneurs to greater openness and to share and gain knowledge in the network, accelerating innovation. It

confirms the supposition that learning is a byproduct of inter-organizational relationship (Podolny and Page, 1998; Child, 2001) and the networks play an important role for the competitiveness of small firms in dynamic competitive environments.

Competition for the same market

Redemac: The fact that there is no more than one store in the same city is said as very important to ensure that participants are willing to exchange ideas. "If there was another member of the business network in this city, we would not feel comfortable to share knowledge." For another entrepreneur this fact has "too much influence. (...) In a local association the competitors would not open [the information], because we would be competing in the same field".

Rede Construir: Although one of the interviewed shopkeepers believes that the existence of direct competitors in the network may limit the learning and information sharing, shopkeepers also states that "currently only superficial information circulates within the network. Information about management and private information of the stores do not circulate". The lack of participation of this entrepreneur in the network is one possible explanation for the limitations in the access to information to which he refers. The remaining entrepreneurs argued that the nonexistence of competitors is primordial to permit the exchange of strategic knowledge.

The lack of direct competitors within the network proved to be a key element for the network success and the building of a favorable environment for learning (Park and Ungson, 2001). The type of information circulating in the network is significantly different when there are competitors in the group - as revealed by the manager of Rede Construir. In addition, learning experiences as acknowledged by the interviewed entrepreneurs - like visits to shops, forums, information exchange, discussions of strategy - are possible or occur more effectively because there is the feeling that no partner will use this knowledge to affect another.

Trust level/quality of relationships

The evidences from the field made it possible to identify issues related to trust level.

Redemac: The entrepreneurs consider as good the relationship within the network and also that it stimulates the exchanges of information and knowledge. The existence of trust is seen as essential because "entrepreneurs see themselves as partners and open up their

their stores for the others, to know and see what is being done". The selection of the partners is strongly considered to carry on good relations: "People need to have the profile to cooperate, otherwise it will not work". Once inside the network, the participation in teams and activities is pointed as a way to stimulate the development of interpersonal trust, because it allows retailers to know better each other and so deepen their ties.

Rede Construir: The existence of conflicts is pointed by one interviewed businessman as impacting negatively on the quality of relationship and therefore on the participation and willingness to exchange information, reducing the learning. "There are many different heads in the network. There are conflicts and today the highest quality of a president is knowing how to manage conflicts". The relation among the conflicts, the network environment and the learning of the group is also observed: "This type of conflict leads the people to be not so participative and ends up influencing negatively the possibility to exchange information".

Differences in the quality of relationships and conflicts in each network confirm the importance of this factor as a moderator of network learning (Floren and Tell, 2004) and affect the entrepreneurs participation in the network. When the participation decreases is understandable that learning opportunities are also smaller. According to Lee et al. (2004), the exchange of knowledge depends on a participation and an atmosphere of trust - where the predisposition of those involved makes the learning possible. The businessmen testimonies reinforce the importance of social interaction (participation), trust between staff and the quality of relationships for learning occurs, as the socio-cultural perspective maintains.

Power relations

Redemac: This network was build up to permit equal participation opportunities and balanced power. However, relations of power are inevitable. For the interviewed entrepreneurs, "In principle, everybody has equal vote in the network, but in the assemblies and in the teams, the one who persuades better get more votes for one position or another." The participation in events and activities also leads to a power source, as it allows leverage on the decisions and directions of the network: "Participation in teams is one way to get power and have more influence. Without participating I cannot discuss".

Rede Construir: One entrepreneur points out that the network activities are controlled in large part by those who have the largest volumes of purchase. As a result, the issues to be discussed and the central themes of the

network are also determined by the representatives of these firms. "One businessman who represents a larger volume, founders... have a greater influence on the others". And he keeps stating, "the new coming entrepreneur wants to participate, but he is limited to some extent". In both networks, the existence of power relations is confirmed by the entrepreneurs, but from different perspectives. If in Redemac the participation in teams, the ability to debate and defend of ideas are seen as a way of directing the activities, in Rede Construir the volume of associated purchases is seen as a source of power. This confirms the arguments of Lotia (2004) regarding the direction of the activities by the most powerful network organizations. It is them who determine the network direction, which actions will be prioritized, influencing the social relationships and the learning that emerges from them.

It is not possible to ignore that power relations can affect the environment quality, lead to conflict and influence in the willingness to participate (Lima et al., 2004). Consequently, it can lead to misalignment of goals; to decreasing the participants motivation and affect the relationships that are so important for learning (Hamel, 1991) according to the perspective of socio-cultural learning (Strati, 1998, Gherardi and Nicolini, 2001).

Control mechanisms

Redemac: The network seeks to use evaluation and control mechanisms to guarantee that the goals already set and the decisions of the assemblies are put into practice. "We work with strategic planning in the teams and we check if the actions were carried out in both teams and network."

Rede Construir: An interviewed businessman who does not participate in network management believes that there is no checking to control what was determined in the network: "For us there is no verification. Some leave the network just because they don't do what was set up. The network gives total freedom, everyone does what he wants". Another entrepreneur thinks that the network avoids a level of control that may generate dissatisfaction among the members by reducing their freedom of action. Both networks have mechanisms to verify and control the members actions, as argued by Child (2001), although the effectiveness of Rede Construir controls is noticed not enough by the interviewed. The main learning gains posted by the interviewed entrepreneurs are the result of a individual decision to seek knowledge and information within the network and with partners, rather than planning and verification of the network itself. Control mechanisms, in the manner provided by Child (2001), seem more effective to ensure that decisions are met than to stimulate learning and there is a risk that resources are transformed into ends.

Mechanisms of information and communication

Redemac: The electronic channels of communication and information are the most used by the network, including intranet for data exchange. Despite the facilities of electronic communication an entrepreneur said that "the exchange of experiences and information happen more when we are together in teams, in the forums or in the technical visits." Therefore, the existence of rapid communication does not fully replace the presence and interaction times for the learning to occur.

Rede Construir: The exchange of operational information is carried out exclusively by e-mail or intranet, where it is possible to "access the network information, surveys, minutes of meetings, 'their' targets and answer the research. It is not a personal relationship, but only data exchange". According to another entrepreneur "the minutes of the board and teams meetings bring what was settled but it is in the side conversations that you may capture many things". Another businessman confirmed that although there were newsletters sent by e-mail, "who participated in the teams, within the network, was obviously more 'inside' and probably could take more advantage."

Although information technology had been noted by Child (2001), it is not enough for strategic learning. It is in the personal meetings, conversations and meetings between entrepreneurs that circulate the information considered by them more relevant and valuable. While it seems appropriate that information be available even to those who might not be interested in using them immediately (Child, 2001), such as in the case of the minutes of meetings, learning occurs more often in interaction moments, showing once more the importance of participation and social (Strati, 1998; Gherardi and Nicolini, 2001).

Existence of shared goals

Redemac: The alignment of goals is shown as a factor of great importance for the maintenance of motivation and members' participation. Redemac avoids making decisions in which there is a division of opinions. It is avoided that a significant proportion of members be dissatisfied or unmotivated and therefore less committed and interested in participating in the network activities. However, "the one who lost [in a poll] will still have to respect what has been established". For another entrepreneur, "there are some controversial decisions, but who does not accept this does not even enter the network".

Rede Construir: The network capacity to maintain common goals and overcome inevitable conflicts shows it is relevant to maintaining a learning environment. The

difference among the networks, precisely in relation to making decisions without dividing the group, has impact on the decision of businessmen to continue participating and sharing information. However, as pointed out by Khanna et al. (1998), it is common to have asymmetric incentives to invest in the relationship, as the cooperation evolves and objectives that were initially common become distinct. It is understandable that those entrepreneurs who do not see their goals minimally reflected in the network objectives feel less motivated and less likely to perform the activities that the network proposes.

Complementary knowledge

Redemac: According to an entrepreneur, the existence of complementary knowledge among entrepreneurs is evident. "The people join the teams where they have more affinity, but there is a principle to go through them all. Not only the knowledge complementarity is perceptible, but also the network is concerned in encouraging the circulation of the businessmen through the teams so that the learning may occur in different areas. "The network wants to have a turnover within the groups (...) to access other knowledge and connect with other entrepreneurs".

Rede Construir: There are entrepreneurs with different profiles and knowledge, but one of the main reasons emphasized by an entrepreneur to make him feel discouraged is that the exchange of complementary knowledge in the group is worn out. "Sometimes we lack the will to talk to one or another, because it becomes repetitive, it is nothing new." He adds "in the beginning it is a very great gain of knowledge, but afterward we become, maybe, too demanding, desiring to learn continuously. It seems that if no new firms enter the network, you have to settle down, had already sucked all that the others know".

The existence of complementary knowledge and idiosyncratic resources (Dyer and Singh, 1998) is clearly visible in both business networks, in the entrepreneurs' opinion. The possibility that such knowledge may be shared is noticed as an important factor to motivate some businessmen and stimulate participation. When there is no perception that being there may be beneficial (in terms of information, knowledge and learning), entrepreneurs prefer to be involved without effective participation, reflecting on the continuity and future of the network.

Predisposition to learn

Redemac: One of the businessmen believes that entrepreneurs "are open to learn. I think it is an amazing school; we had much evolution and greatly improved our business". Another businessman reinforces the importance of the network as a source of learning: "I think

that most people recognize that one of the main benefits is the exchange of experiences and they value it much". The entrepreneur with less time of participation in the network points out that learning is significant because each shopkeeper has his strength points and passes these information through. The predisposition to acquire knowledge in the network may generate differentiated learning among the partners.

Rede Construir: The differences of concernment about learning are perceived by one of the entrepreneurs. "Some do not want to learn and for others it does not matter, but there are also those who seek to learn everything they can. Some think they know everything and are not open to learning".

The decision of an entrepreneur not to participate also reflects his lack of motivation with the network and little willingness to learn.

Openness and willingness to learn, noted by Hamel (1991) and Floren and Tell (2004), are essential for learning to occur in business networks. Members with no participation in the network activities and therefore showing little responsiveness to information circulating in the group, reported few opportunities for learning. Empirical evidences show that when entrepreneurs are not open to learning or the firms they represent do not accept the knowledge that the network can provide, it is unlikely that other mechanisms created by the networks are sufficient for IOL to occur.

FINAL CONSIDERATIONS

The study sought to broaden the understanding of the learning processes that occur in horizontal networks created by small-firms. The evidence reinforced the statements of Child (2001) on learning as a natural result of collaborative arrangements. In the studied networks, learning occurred naturally from the meeting of individuals with different knowledge and experiences, even ceasing to be a byproduct to become an important motivating factor (or, in its absence, a lack of motivation) for the businessmen in the network. Create and maintain an environment where learning is encouraged seems like a challenge for entrepreneurs and managers of business networks. Although economic gains may be important motivators for a firm entry on a network, they fall in importance as they become institutionalized, reserving for learning opportunities the role of concernment maintainer to entrepreneurs for networking.

According to the businessmen, the networks realize information and knowledge exchange able to boost not only technical and systemic learning but also strategic learning (Child, 2001). It was observed that the businessmen's involvement in the network activities and their participation in the teams were fundamental for the learning evolution in more advanced levels, better than

the life span of the cooperative arrangement.

Field research also brought light on the allegations of Floren and Tell (2004) about the limits of network learning, resulting from the continuous interaction of the participants. Closed networks that do not allow the entrance of new partners or has difficulty in obtaining outside knowledge, are likely to achieve lower levels of learning over time, affecting the quality of relationships, motivation and participation of entrepreneurs.

It is noteworthy that by the socio-cultural perspective of IOL it is possible to emphasize the historical, mediated and transformational nature of collaborative ventures. The concept of activity is seen as cognate of practice and dissolves the distinction between order and disorder. This happens because activities are always structured in communities and are orientated to work on items already partially existing, emerging and created within the activity itself, the recognition of the object of an activity requires expansive learning. Such an expansion demands the activity system to learn new ways to accommodate all the different elements of composition, an effort that inevitably affects the nature of the performed activity and generate new contradictions and inconsistencies, triggering a new cycle of transformation. Therefore, the inclusion and opening for new members may implement this transformation process.

The lack of competitors within the network and the development and maintenance of an environment of trust are also essential to support learning and knowledge exchange (Floren and Tell, 2004). Furthermore, the alignment of goals in an environment where there are power relations is necessary to avoid the deterioration of relations. Managers have an important role in monitoring the entrepreneurs' concern in the cooperation process and their perception of the network goals.

Finally, the active entrepreneurs' participation in the network activities proved to be a key element for the learning to occur and be perceived. The mechanisms of communication and control used by the studied networks do not cover information and knowledge as significant as those circulating in moments of personal interaction, in which higher learning occurs. The participation is directly related to the disposition of entrepreneurs to learn (Hamel, 1991; Floren and Tell, 2004) and to their openness to accept different viewpoints and experiences but can also be affected by relations of power (Lotia, 2004) and conflicts that emerge in the network. The emphasis given to elements such as participation, quality of relationship and moments of interaction converges with the perspective of socio-cultural learning, based on the idea that participation of individuals in social activities (Gherardi et al., 1998) is essential for learning to occur.

From the theoretical point of view, this study contributes to a better understanding of learning in business networks, with emphasis on the multiplicity of elements that generate influence and deserve attention in the process. It is through the interrelationship of the studied elements that the learning process is built and continually

modified in the inter-organizational environment, proving to be essential for the cooperative relationship with status of motivator of participation and maintenance of many entrepreneurs interest in the network. The decrease of learning is a challenge to be overcome, being the requisite to avoid the loss of interest in cooperative activities.

This study did not intend to produce conclusive results on IOL in horizontal business networks. The aspects such as the kinds of learning that occur in business networks throughout their life cycle deserve to be fleshed out - especially with research methods allowing the proper achievement of this goal. It is suggested to carry further studies, with networks of other business segments and with features differing from those who participated in this research. Further studies may also include network learning (Knight and Pye, 2005) besides the inter-organizational learning approached in this research.

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