

---- EARLY VIEW ----

BASES, PROCESSES, RESULTS AND CONTEXTS OF INTERORGANIZATIONAL LEARNING IN COOPERATION NETWORKS: A MULTIPLE CASE STUDY

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ABSTRACT

Objective: To analyze the constitution of bases, processes, outcomes and contexts of interorganizational learning in cooperation networks. **Method:** Multiple case study through interviews and document analysis was performed in three cooperation networks, with a predominance of micro and small companies in the industry, commerce and services segments. **Main results:** Interorganizational learning can be identified on an interorganizational basis, by strengthening the network companies' competitiveness, providing opportunities for joint participation in activities. Learning processes – formal and informal – have occurred through the exchange of experiences and knowledge sharing. As outcomes, aspects learned in the network have been used internally by companies, which involves their paths and expectations. **Theoretical / methodological contributions:** We have highlighted the constitution of interorganizational learning, that is, bases, processes and outcomes, as well as their interactions with the context. **Relevance / originality:** The study contributes to the knowledge in interorganizational learning, especially in its processes, by taking in consideration the importance of multilevel analysis. It expands the scarce number of studies that investigate learning in cooperation networks. **Social / managerial contributions:** The importance of learning and knowledge generated from interorganizational relationships, with an emphasis on the role of the boundary spanners and on contextual aspects in order to promote qualification of internal processes and to expand the comprehension of costs and risks involved.

Keywords: Interorganizational learning. Learning processes and bases. Learning outcomes. Learning contexts. Cooperation networks.



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BASES, PROCESSOS, RESULTADOS E CONTEXTOS DA APRENDIZAGEM INTERORGANIZACIONAL EM REDES DE COOPERAÇÃO: UM ESTUDO DE CASOS MÚLTIPLOS

RESUMO

Objetivo do estudo: Analisar como se constituem as bases, os processos, os outcomes e os contextos da aprendizagem interorganizacional em redes de cooperação. **Metodologia/abordagem:** Estudo de casos múltiplos, por meio de entrevistas e de análise documental, em três redes de cooperação, com predomínio de micro e pequenas empresas dos segmentos da indústria, do comércio e de serviços. **Principais resultados:** A aprendizagem interorganizacional pode ser identificada pelo fortalecimento da competitividade nas bases empresariais, que oportuniza a participação conjunta em atividades. O processo de aprendizagem – formal e informal – acontece na troca de experiências e no compartilhamento de conhecimentos, cujos resultados, obtidos na rede de cooperação, são utilizados internamente nas empresas, conforme as suas trajetórias e expectativas. **Contribuições teóricas/metodológicas:** O estudo evidencia a aprendizagem interorganizacional em sua constituição, ou seja, nas bases, nos processos, nos resultados e em suas interações com o contexto. **Relevância/originalidade:** Contribui-se com o avanço do conhecimento da aprendizagem interorganizacional, especialmente no que tange aos seus processos, por conta da importância da análise multinível; e se amplia o escasso número de pesquisas sobre a aprendizagem em redes de cooperação. **Contribuições sociais / para a gestão:** Destaca-se a relevância da aprendizagem e do conhecimento gerados a partir dos relacionamentos interorganizacionais, com destaque ao papel dos interfaceadores e aos aspectos contextuais na promoção da qualificação dos processos internos e da ampliação da compreensão dos custos e dos riscos envolvidos.

Palavras-chave: Aprendizagem interorganizacional. Processos e bases de aprendizagem. Resultados de aprendizagem. Contextos de aprendizagem. Redes de cooperação.

1 INTRODUCTION

Economic and social transformations push companies to seek alternatives to guarantee and advance their sustainability. Many companies have opted for cooperation with suppliers, customers and even with competitors in order to achieve better results. (Martin, Romero & Wegner, 2019). Interorganizational relationships (IOR) show a scenario in which cooperation between agents is a by-product of knowledge sharing of negotiations emerging from the interaction. (Balestrin & Verschoore, 2016; Saccomano & Truzzi, 2009).

Exchanges between organizations create demands that are not effective unless partners work closely together (Carmeli, Zivan, Gomes & Markman, 2020). Small companies are included in this context through cooperation networks that promote competitiveness (Castells, 2005; Grandori & Soda, 1995; Gronum, Verreyne & Kastle, 2012).

One of the key factors for the development of IORs is Interorganizational Learning (IL) (Barroso-Méndez, Galera-Casquet & Valero-Amaro, 2015), which takes place within cooperative groups or pairs inside organizations (Knight, 2002). IL contributes to the formation of knowledge foundations that allow the identification and qualification of opportunities as well as the execution of strategies. As a result, decision making and capability to deal with ambiguity are promoted (Carmeli *et al.*, 2020; Kull & Ellis, 2016; Peronard e Brix, 2019). IL results depend on and interact with their bases, processes and contexts, e.g aspects related to trust and relational dynamics, culture, boundary spanners'



activities, tacit and explicit knowledge as well as exploration and exploitation (Larentis, Antonello, Milan & De Toni, 2014).

The importance of these set of elements within cooperation networks must be highlighted (Gibb, Sune & Albers, 2017). These cooperation networks consist of companies working together to carry out tasks that they would not be able to do on their own. In spite of working together these companies remain independent (Wincent, Thorgren & Anokhin, 2014). Given its bases, processes, outcomes and contexts, IL occurs when companies start working jointly once they understand the need for cooperation in order to increase their efficiency and competitiveness (Chen, 2010).

Since IL is a key factor for IORs, we aim to analyze how IL bases, processes, outcomes and contexts are created in organizations engaged in cooperation networks. The empirical study has been carried out through a multiple case study involving three cooperation networks. (Children's education, pharmaceutical retail and furniture industry supplier).

The results contribute to the development of IL knowledge, particularly concerning their processes, since there is a need for multi-layered analysis of organizational learning due to the predominance of studies on individual and organizational levels (Antonello & Godoy, 2010; 2011; Balestrin & Verschorre, 2016; Estivalet & Pedrozo, 2018; Nogueira & Odellius, 2015). Mozzato and Bitencourt argue that although IL processes are not widely studied yet, they have become a relevant research field for the understanding of IORs scenarios and aspects.

Regarding the research field, we must point out the scarcity of studies related to learning processes in cooperation networks (Gibb et al, 2017). From a managerial standpoint, the study offers managers and cooperation network participants insights into how to potentialize IL and promote competitiveness.

2 THEORETICAL BACKGROUND

2.1 Interorganizational Relationships (IOR) and Cooperation Networks

Interorganizational relationships have occurred for decades, as shown by seminal studies by Jarillo (1988), Nohria and Eccles (1992), Grandori and Soda (1995), Podolny and Page (1998) and Castells (2005). However, building long-term IORs is a difficult process, which evolves over time. IORs are based on relatively continual exchanges with fluxes and connections between organizations (Oliver, 1990).

A specific model of interorganizational relationship is named Cooperation Network, in which small and medium-sized companies work formally and conjointly over an unspecific period in order to achieve common goals. (Schmidt, Wegner & Fortes, 2019; Wegner, Faccin & Dolci, 2018; Wegner & Mozzato, 2019).

Trust is one of the most relevant dimensions for organizations engaging in cooperation networks, since they may involve organizations that belong to the same market (Lewicka & Zakrzewska-Bielawska, 2020; Massaro, Moro, Aschauer & Fink, 2019).

Cooperation between small and medium-sized companies develops a collective identity capable to create competitive advantages over companies working on their own (Verschoore, Balestrin & Perucia, 2014).

The advantages obtained from the cooperation include greater access to resources (Oliver, 1990), knowledge and information sharing (Gausdal et al., 2016; Hoffmann et al., 2014), reducing uncertainties, costs, scale and scope (Becker & Dietz, 2004; Oliver, 1990).



Therefore, IL is an intrinsic aspect of cooperation networks. According to Larson et al. (1998) cooperation speeds up learning processes and reduces the time to obtain a new product, process or access to new technologies. It is important to point out that relationships may be terminated due to a lack of holistic view of knowledge sharing (Milagres & Burcharth, 2019).

2.2 Interorganizational Learning (IL)

IL is the learning that occurs within groups or pairs of cooperating organizations (Knight & Pye, 2005). IL implies individuals from different organizations with specific experiences and trajectories cooperating with each other (Knight, 2002). IL encompasses learning about how to compete and how to create performance (Gibb et al., 2017). Moreover, both parties' interest in sharing knowledge (Rajala, 2018)

Organizational learning and IL work hand in hand. They rely both on organizations' internal interactions and their interactions with multiple settings and publics, which lead up to new understandings, new ways to perform tasks and new skills (Holmqvist, 2003; Mohr & Sengupta, 2002). Hence, IL may be regarded as a booster of relational value, which strengthens the bonds between partners and mitigates the negative effects of their interdependence (Badir & O'Connor, 2015; Kull & Ellis, 2016).

It is important to highlight the need to invest time in order to establish, strengthen and maintain IL, by means of processes, interaction structures, information sharing and interpretation dependent on the people involved in the relationships (Rajala, 2018).

In figure 1, Larentis *et al.* (2014) present IL bases, processes, outcomes and contexts. Dashed lines in the boxes show the permeability of these dimensions with contexts, while double arrows show interactions between dimensions.



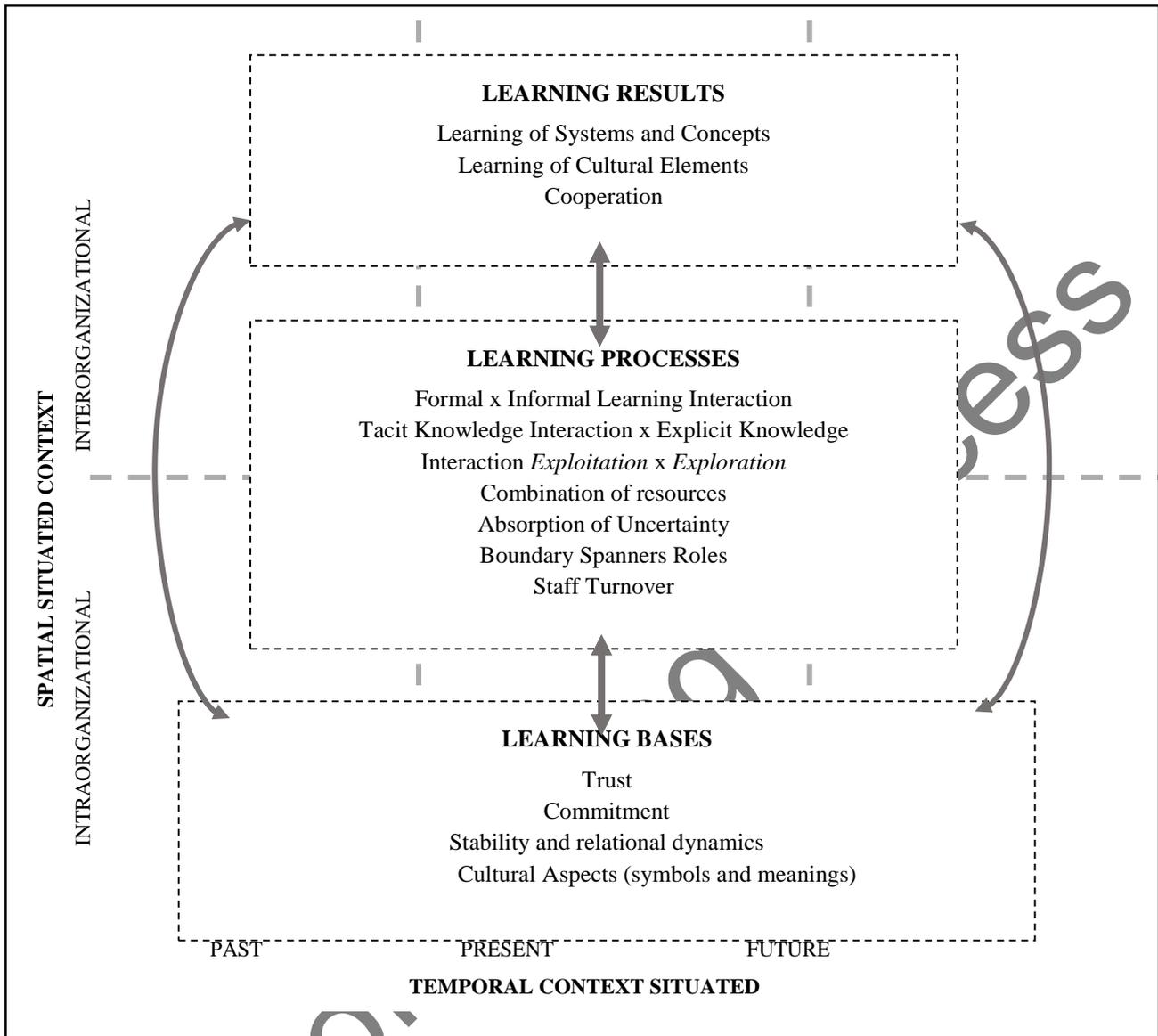


Figure 1
 IL Bases, processes and outcomes.
 Source: Larentis *et al.* (2014, p. 361).

IL bases allow organizations to develop different capabilities by promoting learning processes. Interactions between learning and knowledge, appropriation and improvement of new knowledges prevail in IL processes. IL results in collaborative practices, specific management and cultural elements to the individuals involved (Larentis *et al.*, 2014).

Situated learning context is divided into 2 axes: temporal and spatial (Nonaka, Toyama & Hirata, 2011; Larentis *et al.*, 2014). Lave and Wenger (1991) state that learning is shaped by the activity, context and culture in which learning is situated. Situating means engaging individuals, the environment and activities aimed to create meaning (Larentis, Antonello & Slongo, 2019).

2.2.1 Constituting Elements of IL Dimensions

Below we present the definitions for key elements that constitute IL bases, processes, outcomes and contexts according to Larentis *et al.* (2014).



Regarding bases, trust is a belief on the part of the focal company in the honesty and benevolence of its counterpart. Trust increases information sharing, security to invest in the relationship, diminishes opportunism and facilitates IL processes (Child & Faulkner, 1998; Estivaleta & Pedrozo, 2018; Geyskens, Steenkamp & Kumar, 1999).

Commitment involves the remaining desire to maintain a valuable relationship (Palmatier, Dant, Grewal & Evans, 2006).

Concerning relational stability and dynamics, it is understood that interorganizational relationships are stable enough to last in the long run and dynamic enough to guarantee that learning process may go on (Batt & Purchase, 2004). Cultural aspects refer to shared symbols and meanings within the organizational context (Alvesson, 2013).

Regarding formal and informal learning processes, formal learning features planning and structuring. Informal learning occurs spontaneously between partners through interactions and informal relations both within and between organizations (Janowicz-Panjaitan & Noorderhaven, 2008). Learning processes, affected by the slow relationship development, depend on issues such as trust, commitment and cooperation (Antonello, 2011; Hardy et al., 2003).

As for the interaction between tacit and explicit knowledge, explicit knowledge is formal, systematic and easily shared. Tacit knowledge is based on experiences, beliefs, values, perspectives and individuals. The interaction between these kinds of knowledge is accomplished by individuals and developed at a group level (Nonaka et al., 2011).

In terms of exploration and exploitation, it is worth pointing out the tensions between acquiring new knowledges and learnings in an exploratory way (exploration) and fully using what has been learned and developed (exploitation) (March 1991). Interorganizational processes favor exploration and interorganizational processes favor exploitations (Holmqvist, 2003). However, in networks with a higher level of politics and lower level of trust exploitation is more likely to occur than exploration (Yström, Ollila, Agogué & Coghlan 2019).

Resource combination allows both building organizational capabilities and learning through social and political interactions (Hardy et al., 2003). IL allows resource combination to go beyond companies' particular interests, thus intensifying and refining knowledge, and leveraging synergic effects (Bouncken, Pesch & Kraus, 2015).

As for uncertainty absorption, IOR companies are motivated to engage in joint learning activities in order to gain control or mitigate consequences of uncertainty (Selnes & Sallis, 2003). Boundary spanners are agents and organizational representatives who strengthen organizational relations, thus contributing to cooperation routines, IL and creation of relational capital (Aldrich & Herker, 1977; Larentis *et al.*, 2019; Lascaux, 2019; Rajala, 2018) Therefore, staff turnover mainly among boundary spanners can weaken IOR (Pettersen, 2001).

As for learning outcomes, system and concept learning are related to management practices. Learning cultural elements is represented by common symbols and meanings as a result of the relationship between the two organizations (Larentis, Antonello & Slongo, 2018; Larentis *et al.*, 2019).

Cooperation involves companies' pursuit of mutual goals and benefits by sharing capabilities and resources (Wang & Krakover, 2008). IL depends on interaction-oriented behaviors and cooperation (Estivaleta & Pedrozo, 2018).

In situated learning contexts, temporal context consists of past (individuals' and organizations' experiences and paths), present (current situation of interactions) and future (trends, expectations and interests) (Nonaka et al., 2011).



Spatial context relies on intraorganizational and interorganizational levels, since IL develops by means of collaboration between organizations (Holmqvist, 2003).

3 METHODOLOGICAL ASPECTS

We have carried out a qualitative, exploratory- descriptive multiple case study. As argued by Merriam and Tisdell (2016), the analysis of multiple cases and their variation by the same study allows accurate, valid and stable results. Three cooperation networks based in Serra Gaucha region have participated in the study. These networks have been named as follows: RC A (furniture industry supplier), RC B (Child Education) and RC C (pharmaceutical retailer). We have chosen three cooperation networks from different segments (industry, commerce and services), which have been in the market for similar time.

Cooperation networks A, B and C, which were formed in 2003 and 2004, encompass respectively 15, 13 and 23 participating companies. They are similar in their organization of meetings, assemblies and trainings. We have used the triangulation process of data collection (Yin, 2015), through the analysis of networks documents: establishment background, network and companies' structure, mission and events, strategic planning, product and service portfolio, meeting schedule and sites.

In-depth interviews were carried out with individuals with high interaction in the networks, who might have been owners or managers of the 17 companies or presidents of the networks. We have used a semi-structured approach interview script. We applied an interview script for companies and another for network presidents. These scripts varied slightly according to the role played in the network, which were drawn up based on the framework designed by Larentis *et. al* (2014) (Figure 1)

The choice of companies took into account their length in the network following the temporal learning context (Nonaka et al., 2011). Twenty in depth-interviews approximately 50 minutes long were recorded and then transcribed (Table 1). The number of interviewees was based on the saturation principle (Godoy & Mattos, 2006).



RC	Company	Established in	Company working in the network			Number of Employees
			Up to 4 years	5 to 8 years	Over 9 years	
A: Established in 2004	A1	1978		X		430
	A2	1994	X			114
	A3	1990	X			210
	A4	1986			X	18
	A5	1988		X		25
	A6	1995			X	60
	A7	1997			X	21
	A8	2004			X	3
	President.A	-		X		16
B: Established in 2004	B1	2004			X	32
	B2	2012	X			13
	B3	1992		X		22
	B4	2010	X			12
		President B	-		X	
C: Established in 2003	C1	2010		X		2
	C2	1993		X		3
	C3	2003		X		4
	C4	2011	X			2
	C5	1985			X	6
		President	-		X	

Table 1

Detailed in-depth Interviews

Source: Elaborated by the authors (2021).

We have analyzed data in the light of content analysis (Bardin, 2011), predominantly a priori categories (Elements in Figure 1). We have designed a table representing each network, which consists of six columns each: specific goals, analysis categories, summary of results, selected statements, researchers' post-information questionings, which aimed to help interpretation, and base authors. In every line information from every interview is shown, based on summary of results.

4 RESULTS

4.1 IL Bases

The results related to IL bases are shown in Table 1, including every dimension with comparisons between cooperation networks and account selection.

The situation within the three cooperation networks denotes an interdependence between the participating companies. Despite negative situations and failures, learning has been enlarged in the networks. Trust has triggered a collaborative scenario that has allowed learning to happen, which alongside commitment has strengthened bonds.

Stability has been achieved in the networks and has not hindered the development of actions and the dynamics of the network. Stability has contributed to organizational performances and learning processes. Cultural aspects are evident in communication, problem sharing and mutual benefits.



Learning Bases			
Trust			
NETWORKS' SIMILARITIES	Built and strengthened over the years; No competition; Members are in synch.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Trust in what partner is or will be doing; Focus on adding value to partners; Some companies are afraid to disclose information. 	<ul style="list-style-type: none"> Engagement and friendship; Companies willing to join forces. 	<ul style="list-style-type: none"> Shy participation of some members; Some owners are more involved in the network than others.
SELECTED STATEMENT	<p><i>"We build our relationship side by side, day by day. We have our meetings every 2 weeks, which draw us closer together, After the meetings we have dinner together to strengthen our bonds. There is also the fair, an itinerant fair organized by the association. We spend 3 to 5 days together helping one another". (RC A – A3)</i></p>		
Commitment			
NETWORKS' SIMILARITIES	Overall, companies within the networks are engaged; Help one another; Attendance in meetings and events; Rules to be followed and met; Members show different commitment levels; Availability to share information.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Companies seek to recommend to their clients the services by their partners; Strategies to gain market share; Meetings held regularly. 	<ul style="list-style-type: none"> Rapport among members; Negotiation for joint purchases; Good attendance in meetings and lectures. 	<ul style="list-style-type: none"> Negotiation in joint purchases; Lack of commitment by some companies.
SELECTED STATEMENT	<p><i>"[...] People are truly engaged; they have tried to participate and contribute to the actions proposed. At first, we were a little afraid, as we didn't know for sure the functionality of the network but as time went by, we got along" (RC A – A2).</i></p>		
Relational Dynamics and Stability			
NETWORK SIMILARITIES	Stable relationship within network; Closely-knit group and fruitful discussions; Information sharing and cost reduction are encouraged by joint purchases and shared marketing;		
	Stability does not get in the way of the network's dynamics; New members adapt to what has been previously determined.		
Comparisons	RC A	RC B	RC C



PARTICULARITIES	<ul style="list-style-type: none"> • Change in board of directors made the group leave its comfort zone; • Companies' capacity and adaptability; • Members' affinity. 	<ul style="list-style-type: none"> • Joint conflict-solving; • Stability promotes group learning. 	<ul style="list-style-type: none"> • Constructive Relationship.
SELECTED STATEMENT	<p><i>"People who have known each other for longer are more united. Those who joined later gradually adapt to the people, processes and the network structure itself. The relationship is stable and exchanges are getting stronger". (RC C – C1)</i></p>		
Cultural Aspects			
NETWORKS' SIMILARITIES	<p>Members' continual development; Focus on cost reduction; Sharing experiences and problem allows learning within the network</p>		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> • Competitiveness and professionalism orientation • Actions are well defined within the network. 	<ul style="list-style-type: none"> • Continual formation; • Friendly and engaged atmosphere. 	<ul style="list-style-type: none"> • Easy and flexible relationships.
SELECTED STATEMENT	<p><i>"Everyone operates in different ways; it is a partnership aimed at innovation. Friendship and get-together cheer us up. Someone tells what happened in their schools and someone else gives a suggestion. This encourages us to carry on". (RC B – President)</i></p>		

Table 2.
 Summary of IL bases.
 Source: Elaborated by the authors.

4.2 IL Processes

In table 3 we present IL Processes in the three cases studied. Results show that learning occurs in the interaction between formal and informal. Regarding learning limiting factors within the networks, we can highlight lack of cohesion and interest by some members as well as meetings unattendance. Among the facilitating factors, there is good communication and sharing of experiences.

As for tacit and explicit knowledge, the companies use what they have learned in their organizational environment, which adds value to their internal knowledge. Although knowledge is shared, there is a sort of "filter" for the information companies wish to share. Most shared information has to do with financial matters.

The cooperation networks we have studied show a great effort to learn by means of trainings and improvements in their internal knowledge, which is related to the exploitation process. However, they are open to take in what happens outside their premises. They look for guidance in the network, which is defined as exploration. This simultaneous effort allows joining together these two strands of knowledge pursuit, creation and application.

In the area of resource combination, we have identified resources and knowledge sharing as part of problem solving. For instance, RC A has financial resources available for eventualities. RC B has the ability to systematize and manage and RC C has collective buying procedures.

Engineers, school principals, commercial and administrative managers are considered to be boundary spanners, responsible for bringing the organizations within the network closer together. Moreover, there are people from multiple areas within the companies who influence relational exchanges through trainings and courses (teachers, operational line workers and pharmacy clerks). In RCs B and C,



meeting attendees are all owners, who are responsible for disseminating information to their organizations. In RC A, meetings, visits and events are attended by owners, operational managers, commercial managers and engineers.

Concerning uncertainty absorption, most companies stated that their being in the networks helps them cope with financial, political and social difficulties. Low staff turnover among boundary spanners contributes to the continuity of processes, result credibility and to a better image of the participating companies. Networks also show a low turnover of participating companies. In the past, however, results were harmed by the high company turnover in the networks.

Learning Process			
Formal x Informal Learning Interaction			
NETWORKS' SIMILARITIES	Formal meetings with an agenda; In person and online informal meets with members; Confidence and rapport among members.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Informal talks happen more commonly between neighboring companies; 	<ul style="list-style-type: none"> Significant learning presence through lectures and trainings. 	<ul style="list-style-type: none"> Informal talks take place out of affinity;
SELECTED STATEMENT	<i>"There are informal talks besides the monthly meetings, we commonly call each other to share ideas, to ask for something informally". (RC B – B3)</i>		
Interaction Tacit x Explicit Knowledge			
NETWORKS' SIMILARITIES	Sharing information, experiences and knowledge; Some information is not disclosed; Assemblies to share knowledge within the network; Relevant tips by more experienced companies.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Commercial focus. 	<ul style="list-style-type: none"> Trainings are provided to all teacher in the schools of the network. 	—
SELECTED STATEMENT	<i>"We retain what is interesting and every company is managed in different ways. Knowledge promoted by the association is taken in in different ways (RC A – A6).</i>		
Interaction Exploitation x Exploration			
NETWORKS' SIMILARITIES	Using learning in the network inside the organization; Valuing every companies' internal knowledge (<i>exploitation</i>); Pursuit of common benefits and new ways to work in order to improve the network (<i>exploration</i>).		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Client prospection processes through fairs. 	<ul style="list-style-type: none"> Individual learning spread to the group; Attempt to improve existing learning. 	—
SELECTED STATEMENT	<i>"I think they are to follow the other companies (in the network) like in the case of the fidelity card. They tried hard and virtually every day there is a new company doing a partnership". (RC C – C6)</i>		
Resource Combination			



NETWORK'S SIMILARITIES	Sharing ideas in problem-solving; Shared knowledge and experience help some members.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> • Holding fairs; • Focus on finances; 	<ul style="list-style-type: none"> • Joint purchases of trainings and promotional material; 	<ul style="list-style-type: none"> • Joint purchases of medicine and promotional material;
SELECTED STATEMENT	<i>"Often times we can clear each other's doubts. Other times the group doesn't have the information, nobody knows it, we look for support". (RC B – B5).</i>		
Uncertainty Absorption			
NETWORK'S SIMILARITIES	Working together to increase everyone's competitiveness; Networking helps to deal with economic, political and social difficulties.		
Comparisons	RC A	RC B	RCC
PARTICULARITIES	<ul style="list-style-type: none"> • Companies are optimistic in the market. 	<ul style="list-style-type: none"> • Hiring training and lectures for teachers of all the school in the network. 	—
SELECTED STATEMENT	<i>"Given the unpredictability of the market I think that being in the network helps up to 30% because the group thinks positively, invests in the market to try hard". (RC A – A1).</i>		
Boundary Spanners' Roles			
NETWORK'S SIMILARITIES	Boundary Spanners: Owners/ directors and managers involved in the network. Responsible to capture information and disseminate knowledge to company's teams.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> • Strategic people. 	—	—
SELECTED STATEMENT	<i>"Two engineers attend the meetings, then we learn about them. We go to strategic meetings. They will be our managers in the future. We have evaluated them for the processes. There are several processes and one of them consists of representing the company in the network (RC A – A7).</i>		
Staff Turnover			
NETWORKS' SIMILARITIES	Boundary Spanners' low turnover; Owners and managers actively engage in the network's activities		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> • There were competitors in the past, but nowadays no more. 	Teachers join trainings and lectures.	—
SELECTED STATEMENT	<i>"Turnover brings positive and negative factors. A representative who no longer participates as a member in the network takes away a great deal of experience. A new representative can bring new ideas, experiences and energy to the group." (RC A – A5).</i>		



Table 3

IL Summary of IL Process

Source: Elaborated by the authors (2021).

4.3 IL Outcomes

Findings in the Outcomes area are shown in Table 3 as follows. Regarding learning of systems and concepts related to management practices, companies incorporate learning as a set of both social and economic interests. They take into account accomplished experiences and learning. Moreover, there have been improvements in management practices.

In terms of cultural element learning, one may see the companies' way of being, which may be regarded as a collective construction based on the networks' interactions. These interactions occur under two perspectives: an integrating perspective (companies with objectives in common) and an orienting (complementary companies) perspective. There are also significances related to networking culture.

The increase of companies' individual competitiveness stemming from collective actions has nurtured learning within the networks. Cooperation has mitigated individual difficulties by means of common actions, such as information exchange and joint problem solving.

Learning Outcomes			
System and Concept Learning			
NETWORKS' SIMILARITIES	Members' learning capability influences network success; Companies access new styles and ways to approach management and opportunities.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Being in the network allows more openness to the market. 	<ul style="list-style-type: none"> Being in the network allows school promotion; 	<ul style="list-style-type: none"> Being in the network increased competitiveness through collective purchases
SELECTED STATEMENT	<i>"People have experiences to share, we can have a lot of insights. the best is that we can acquire experiences, we can learn how to deal with some situations. Often times before I had my hands tied, I didn't know what to do, what to say". (RC B – B2)</i>		
Learning of Cultural Elements			
NETWORKS' SIMILARITIES	Interaction between the boldness of some companies and the conservatism of others; Effort to learn something new; Network culture is being learned.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Synchrony to belong to the association. 	<ul style="list-style-type: none"> Owners identify with one another, since in their schools they work in the same operational department; 	<ul style="list-style-type: none"> Owners identify with one another since they work directly with clients.



SELECTED STATEMENT	<p><i>“I see a great difference between those that have been in the network for longer and those that have for a shorter. It is a culture built together, it is easier to walk side by side, adding is better than dividing” (RC B – B1)</i></p>		
Cooperation			
NETWORKS’ SIMILARITIES	<p>Cooperation allows achieving organizational and network goals; Discussion of information with teams from different areas; Rapport and willingness to help members.</p>		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	—	<ul style="list-style-type: none"> • Learning to cut costs through collective purchases and promotions; • Increase of competitiveness for smaller companies. 	<ul style="list-style-type: none"> • Cooperation for collective purchases.
SELECTED STATEMENT	<p><i>“How to sell an unsold item, how to assist clients. “Look, I did this, I placed the item in a more visible area, I cut down the price, when there is public, I focus on it”.</i> (RC C – C3)</p>		

Table 3.

Summary of IL Results.

Source: Elaborated by the authors (2021).

4.4 Temporal and Spatial Situated Contexts

Situated contexts involve the temporal and spatial axes. In Table 5 we show the results.

Concerning Temporal context, we point out the companies’ closeness developed over time, which fosters the sharing of ideas and reduces prejudices. In this regard, companies that have been in the network for a shorter time highlight the importance of more experienced companies. Additionally, they stress the importance of complementarity of competences and development of a common way forward. Concerning Spatial context, at an intraorganizational level, even companies with more significant internal difficulties share costs and risks and develop joint investments. Similarly, interorganizational level learning has returned to intraorganizational levels, thus contributing to better internal activities and processes as well as change of perspectives and business comprehension.

Context and its Relations			
Temporal Context			
NETWORKS’ SIMILARITIES	<p>Essential knowledge and learning for strategic planning; Commitment and trust are getting consolidated.</p>		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> • Before joining the network, the main difficulties were economic and promotional. 	—	<ul style="list-style-type: none"> • Members’ performance and competitiveness increase
SELECTED STATEMENT	<p><i>“Wish to increase performance and competitiveness in the market alongside our partners by means of tools and services collectively provided”.</i> (RC C – C4)</p>		



Spatial Context			
NETWORKS' SIMILARITIES	Informal visits, email and messages denote the good relationship among members; Internal improvements caused by network relationship: IL return to intraorganizational level.		
Comparisons	RC A	RC B	RC C
PARTICULARITIES	<ul style="list-style-type: none"> Fair and tradeshows held by the network allow active competition the market 	<ul style="list-style-type: none"> Familial feelings and relations evolved beyond purely economic interest. 	<ul style="list-style-type: none"> Benefits in purchases
SELECTED STATEMENT	<p><i>“Belonging to the network makes you more attentive to the market and prepared and safe to make decisions as a consequence of the learning occurred in the network”. (RC B – B2)</i></p>		

Table 5.

Summary of IL Contexts.

Source: Elaborated by the authors (2021).

4.5 Considerations about the Conceptual Framework Investigated and Discussion of Results

We consider the conceptual framework by Larentis *et al.* (2014) to be suitable for the analysis of IL. However, given the cooperation networks we have studied we present a review (Figure 2). We suggest a change in the position of the element Relational Stability and Dynamics from Bases to Processes in order to emphasize learning and knowledge interactions due to the companies' experiences and intentions.

We have added two more elements in the Learning Bases dimension: Power Asymmetry and Opportunistic Behavior. Power Asymmetry turned up in the results as a potential interference in the promotion of learning processes. Power Asymmetry affects relationships and information sharing because it is related to the influence of more powerful individuals and groups over others' actions and interpretations (Lucas & Kline, 2008).

Despite collective-oriented decisions, a focal and dominating company is capable of creating a hierarchy and make other agents dependent on it (Cox, 1999; Ferdinand, 2004). Lotia (2004) argues that more powerful organizations are expected to have greater influence over ideas created, debated and interpreted. Therefore, according to research by Wegner (2011) on cooperation networks, one of them was built so that there could be equal participation opportunities and power balance. Nonetheless, power asymmetry was not avoided. The companies in RC B pointed out company B1's capability to exert influence due to its structure, management and relationship capacity.

Opportunistic Behavior is seen as a key factor in IORs and IL because it generates losses for some of the parties involved. Self-interested actions such as privileged information withdrawal and the sharing of misleading information (Estivaleta & Pedrozo, 2018) harm the quality of the interaction and the interest to invest time in the relationship (Bouncken, Pesch & Kraus, 2015; Rajala, 2018).

In the cases we have studied, opportunistic behavior was made evident by statements regarding companies interested in the network's short-term benefits, without attention to other relational implications.



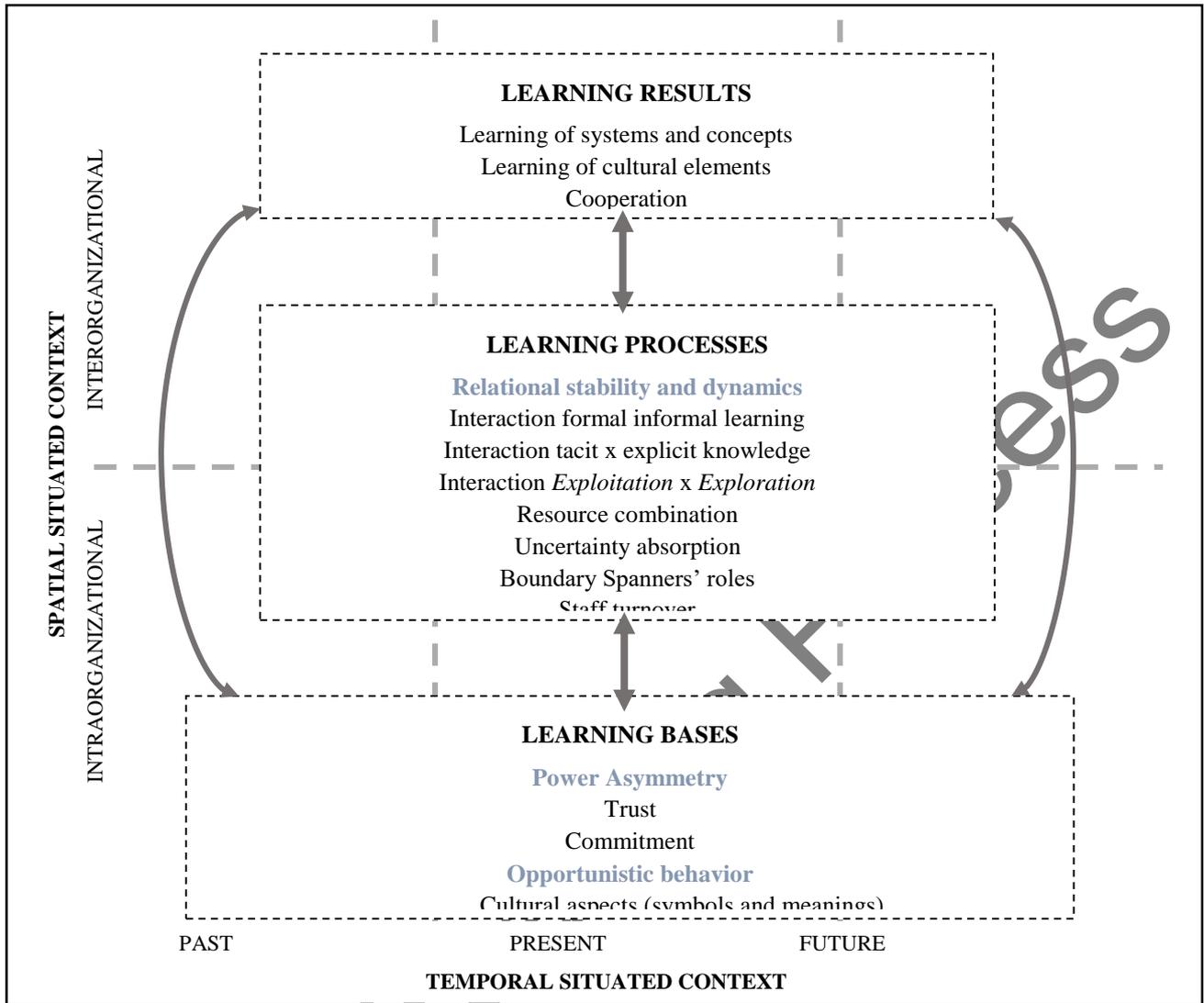


Figure 2
 Revised Conceptual Framework.
 Source: Elaborated by the authors (2021).

Considering the relation between findings, literature and the review of the conceptual framework, firstly we stress commitment and trust as some of the key factors in relationships. These key factors facilitate IL within cooperation networks (Palmatier et al., 2006) Trust creates a social collaboration environment conducive to information sharing and learning (Dyer & Chu, 2003).

Regarding processes, the findings evidence that the relation between informal and formal takes place jointly and complementarily, as stated by Antonello (2011). On the other hand, we can say that the low staff turnover we have identified may be seen as a more significant contributing factor to stability than relational dynamics, since it reduces capacity variation generated by the arrival of new members. (Batt & Purchase, 2004; March, 1991).

Moreover, it is evident how the parties depend on the perception of how multiple aspects, such as contracts, structure, processes and routines, are affected by cooperation processes (Milagres & Burcharth, 2019).

This corroborates Carmeli et al. (2020), who argue that, as companies expand and complement their economic goals, they notice their needs to expand their collaborative competences across their value network.



One may say that IL has socially developed through the formation of convergent values and expectation, which has allowed the emergence of shared cultural aspects, dialogs and action schemes, as identified by Uzunca (2018). Such elements alongside outcomes, bases and processes are developed in situated contexts with the presence of political and power relations (Holmqvist, 2003; Nonaka et al., 2011; Nicolini, Gherardi & Yanow; 2003).

Therefore, belonging to a network has allowed cooperative engagements in intraorganizational and interorganizational terms, through which members have been able to learn more about the network as well as their own organization (Yström et al., 2019). In this perspective, learning occurs through the interaction between individuals, shared practices, the process of becoming a member of a group and its contexts.

We highlight the central role played by the more important companies in a network, which regulate the existing learning processes (Gibb et al., 2017). It is also important to stress the relevance of IL when working with more powerful partners in order to achieve better performance, given the presence of dependence and integration. (Kull & Ellis, 2016). Furthermore, less powerful partners are more likely to share knowledge than their more powerful counterparts (Zhu, Krikke & Camiels, 2018). Hence network legitimacy appears as a central element, which relies on governance mechanism needed in order to facilitate IL (Estivaleta & Pedrozo, 2018; Leung et al., 2019).

5 FINAL REMARKS

By analyzing how IL bases, processes, outcomes and contexts are constituted, we highlight commitment, trust formation, cooperation actions combination of resources and capabilities, boundary spanners' roles and power-related aspects for the development of learning.

We have been able to identify IL in the bases, considering joint actions that cut costs and allowed people's qualification. In the processes, the interactional dynamics and experience sharing are evident through the complementarity of formal and informal learning. As a result, learnings from the network are internally used by the organizations and interact with temporal and spatial contextual aspects. It has been noticed, as stated by to Mohr and Sengupta (2002) that IL may be an extension of organizational learning, which develops a knowledge base, thus generating insights and real opportunities.

From a theoretical standpoint, this study contributes to the framework designed by Larentis *et al.* (2014). The composition of IL bases, processes and outcomes are present in the analyzed networks. We highlight the necessary role of boundary spanners for the continuity of the relationships. The insertion of power asymmetry and opportunistic behavior reinforces the situated learning aspect.

Regarding managerial and social implications, the study reiterates the need to follow up boundary spanners' performance and turnover due to their importance to IORs and IL. In the same vein, it is important to monitor how power asymmetry and opportunistic behavior present themselves, how they change and their influences on the context. Furthermore, the revised conceptual framework can be a guideline to potentialize IL within the networks in both formal and informal aspects.

The main limitations to this study are the fact that we have not considered the networks' regional aspects. Moreover, observation moments could have provided a deeper understanding of tacit aspects of IL. On the other hand, the use of a data analysis software might have enabled better organization of the findings,

For future studies we suggest analyzing the role of networks' governance mechanisms in IL bases, processes and outcomes. Additionally, we suggest using theoretical perspectives that go beyond the scope of this study, such as the New Institutional Economics and the Theory of Transaction Costs in order to deepen elements such as power asymmetry and opportunistic behavior.



6 REFERENCES

- Aldrich, H., & Herker, D. (1977). Boundary spanning roles and organization structure. *Academy of management review*, 2(2), 217-230.
- Alvesson, M. (2013). *Understanding organizational culture*. London: Sage.
- Antonello, C. S. (2011) Saberes no singular? Em discussão a falsa fronteira entre aprendizagem formal e informal. In: C. S. Antonello et al. (Eds). *Aprendizagem organizacional no Brasil* (pp. 225-245). Porto Alegre: Bookman.
- Antonello, C. S., & Godoy, A. S. (2010). A encruzilhada da aprendizagem organizacional: uma visão multiparadigmática. *Revista de Administração Contemporânea*, 14(2), 310-332.
- Balestrin, A., & Verschoore, J. (2016). *Redes de cooperação empresarial: estratégias de gestão na nova economia* (2. ed). Porto Alegre: Bookman.
- Bardin, L. (2011). *Análise de conteúdo* (4. ed.). Lisboa: Edições 70.
- Barroso-Méndez, M. J., Galera-Casquet, C., & Valero-Amaro, V. (2015). Proposal of a social alliance success model from a relationship marketing perspective: A meta-analytical study of the theoretical foundations. *Business Research Quarterly*, 18(3), 188-203.
- Batt, P. J., & Purchase, S. (2004). Managing collaboration within networks and relationships. *Industrial Marketing Management*, 33(3), 169-174.
- Bouncken, R. B., Pesch, R., & Kraus, S. (2015). SME innovativeness in buyer–seller alliances: effects of entry timing strategies and inter-organizational learning. *Review of Managerial Science*, 9(2), 361-384.
- Carmeli, A., Zivan, I., Gomes, E., & Markman, G. D. (2020). Underlining micro socio-psychological mechanisms of buyer-supplier relationships: Implications for inter-organizational learning agility. *Human Resource Management Review*, 100577 (In press).
- Castells, M. (2005). *A sociedade em rede* (Vol. 3). São Paulo: Paz e Terra.
- Chen, B. (2010). Antecedents or processes? Determinants of perceived effectiveness of interorganizational collaborations for public service delivery. *International Public Management Journal*, 13(4), 381-407.
- Child, J., & Faulkner, D. (1998). *Strategies of co-operation: managing alliances, networks and joint ventures*. Oxford: Oxford University Press.
- Cox, A. (1999). Power, value and supply chain management. *Supply Chain Management: An International Journal*.
- Dyer, J. H., & Chu, W. (2003). The role of trustworthiness in reducing transaction costs and improving performance: Empirical evidence from the United States, Japan, and Korea. *Organization Science*, 14(1), 57-68.
- Estivaleta, V., & Pedrozo, E. (2018). From Individual Learning to Interorganizational Learning: Proposition of an Analysis Framework. *Desenvolvimento em Questão*, 16(43), 45-76.
- Ferdinand, J. (2004). Power, politics and state intervention in organizational learning. *Management Learning*, 35(4), 435-450.
- Gausdal, A. H., Svare, H., & Möllering, G. (2016). Why don't all high-trust networks achieve strong network benefits? A case-based exploration of cooperation in Norwegian SME networks. *Journal of Trust Research*, 6(2), 194-212.
- Geyskens, I., Steenkamp, J. B. E., & Kumar, N. (1999). A meta-analysis of satisfaction in marketing channel relationships. *Journal of Marketing Research*, 36(2), 223-238.
- Gibb, J., Sune, A., & Albers, S. (2017). Network learning: Episodes of interorganizational learning towards a collective performance goal. *European Management Journal*, 35(1), 15-25.
- Godoy, C. K., & Mattos, P. L. C. L. (2006). Entrevista qualitativa: instrumento de pesquisa e evento dialógico. In: C. K. Godoy, R. Bandeira-De-Mello, & A. B. Silva (Org.). *Pesquisa qualitativa em estudos organizacionais: paradigmas, estratégias e métodos* (pp. 301-323). São Paulo: Saraiva.
- Grandori, A., & Soda, G. (1995). Inter-firm networks: antecedents, mechanisms and forms. *Organization Studies*, 16(2), 183-214.
- Gronum, S., Verreynne, M. L., & Kastle, T. (2012). The role of networks in small and medium-sized enterprise innovation and firm performance. *Journal of Small Business Management*, 50(2), 257-282.
- Hardy, C., Phillips, N., & Lawrence, T. B. (2003). Resources, knowledge and influence: The organizational effects of interorganizational collaboration. *Journal of Management Studies*, 40(2), 321-347.
- Hoffmann, V. E., Lopes, G. S. C., & Medeiros, J. J. (2014). Knowledge transfer among the small businesses of a Brazilian cluster. *Journal of Business Research*, 67(5), 856-864.
- Holmqvist, M. (2003). A dynamic model of intra-and interorganizational learning. *Organization Studies*, 24(1), 95-123.
- Janowicz-Panjaitan, M., & Noorderhaven, N. G. (2008). Formal and informal interorganizational learning within strategic alliances. *Research Policy*, 37(8), 1337-1355.
- Jarillo, J. C. (1988). On strategic networks. *Strategic Management Journal*, 9(1), 31-41.
- Knight, L. (2002). Network learning: Exploring learning by interorganizational networks. *Human Relations*, 55(4), 427-454.
- Knight, L., & Pye, A. (2005). Network learning: An empirically derived model of learning by groups of organizations. *Human Relations*, 58(3), 369-392.



- Kull, T. J., & Ellis, S. C. (2016). Coping with dependence: a logistics strategy based on interorganizational learning for managing buyer–supplier relations. *Journal of Business Logistics*, 37(4), 346-363.
- Larentis, F., Antonello, C. S., & Slongo, L. A. (2018). *Inter-organizational culture: linking relationship marketing with organizational behavior*. Cham: Springer.
- Larentis, F., Antonello, C. S., Milan, G. S., & De Toni, D. (2014). Aprendizagem organizacional e relacionamentos interorganizacionais: um estudo de casos múltiplos. *Revista Base*, 11(4), 347-366.
- Larentis, F., Simone Antonello, C., & Slongo, L. A. (2018). Organizational culture and relationship marketing: an interorganizational perspective. *Revista Brasileira de Gestão de Negócios*, 20(1), 37-56.
- Lascaux, A. (2019). Absorptive Capacity, Research Output Sharing, and Research Output Capture in University-Industry Partnerships. *Scandinavian Journal of Management*, 35(3), 101045.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
- Leung, C. Y. A., Xu, H., Wu, G. J., & Luthans, K. W. (2019). Industry Peer Networks (IPNs): Cooperative and competitive interorganizational learning and network outcomes. *Management Research Review*, 42(1), 122-140.
- Lewicka, D., & Zakrzewska-Bielawska, A. (2020). Interorganizational Trust in Business Relations: Cooperation and Competition. In: A. Zakrzewska-Bielawska, & I. Staniec. *Contemporary Challenges in Cooperation and Competition in the Age of Industry 4.0* (pp. 155-174). Springer: Cham.
- Lotia, N. (2004). Power dynamics and learning in collaborations. *Journal of Management & Organization*, 10(2), 56-68.
- Lucas, C., & Kline, T. (2008). Understanding the influence of organizational culture and group dynamics on organizational change and learning. *The Learning Organization*, 15(3), 277-287.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.
- Martin, D., Romero, I., & Wegner, D. (2019). Individual, organizational, and institutional determinants of formal and informal inter-firm cooperation in SMEs. *Journal of Small Business Management*, 57(4), 1698-1711.
- Massaro, M., Moro, A., Aschauer, E., & Fink, M. (2019). Trust, control and knowledge transfer in small business networks. *Review of Managerial Science*, 13(2), 267-301.
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: a guide to design and implementation* (4th. ed.). San Francisco: Jossey-Bass.
- Milagres, R., & Burcharth, A. (2019). Knowledge transfer in interorganizational partnerships: what do we know?. *Business Process Management Journal*, 25(1), 27-68.
- Mohr, J. J., & Sengupta, S. (2002). Managing the paradox of inter-firm learning: the role of governance mechanisms. *Journal of Business & Industrial Marketing*, 17(4), 282-301.
- Mozzato, A. R., & Bitencourt, C. C. (2014). Understanding interorganizational learning based on social spaces and learning episodes. *Brazilian Administration Review*, 11(3), 284-301.
- Nicolini, D., Gherardi, S., & Yanow, D. (2003). Introduction: Toward a practice-based view of knowledge and learning in organization. In: D. Nicolini, S. Gherardi, & D. Yanow (Eds.). *Knowing in organizations: a practice-based approach* (pp. 3-31). New York: M. E. Sharpe, p. 3-31
- Nogueira, R. A., & Odellius, C. C. (2015). Desafios da pesquisa em aprendizagem organizacional. *Cadernos EBAPE. BR*, 13(1), 83-102.
- Nohria, N., & Eccles, R. G. (1992). *Networks and organizations: structure, form, and action*. Boston: Harvard Business School Press
- Nonaka, I., Toyama, R., & Hirata, T. (2011). *Managing flow: teoria e casos de empresas baseadas no conhecimento*. Porto Alegre: Bookman, 2011.
- Oliver, C. (1990). Determinants of interorganizational relationships: Integration and future directions. *Academy of Management Review*, 15(2), 241-265.
- Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Journal of marketing*, 70(4), 136-153.
- Peronard, J. P., & Brix, J. (2019). Organizing for inter-organizational learning in service networks. *The Learning Organization*, 26(3), 276-288.
- Petterson, I. G. (2001). A multi-level perspective on the dissolution of business relationships. In: The 17th Annual IMP Conference, Oslo. *Proceedings*.
- Podolny, J. M., & Page, K. L. (1998). Network forms of organization. *Annual Review of Sociology*, 24(1), 57-76.
- Rajala, A. (2018). Examining the effects of interorganizational learning on performance: a meta-analysis. *Journal of Business & Industrial Marketing*, 33(4), 574-584.
- Schmidt, J. R. R., Wegner, D., & Fortes, M. V. B. (2019). A governança de redes interorganizacionais: uma análise da tensão entre eficiência e inclusão no processo decisório. *Revista de Empreendedorismo e Gestão de Pequenas Empresas*, 8(2), 319-340.
- SEDETUR. *Secretaria do Desenvolvimento Econômico e Turismo do Rio Grande do Sul*. Redes de Cooperação. Available in <https://sedetur.rs.gov.br/redes-de-cooperacao> >. Accessed in January 10th 2020.
- Selnes, F., & Sallis, J. (2003). Promoting relationship learning. *Journal of Marketing*, 67(3), 80-95.



- Uzunca, B. (2018). Biological children versus stepchildren: interorganizational learning processes of spinoff and nonspinoff suppliers. *Journal of Management*, 44(8), 3258-3287.
- Verschoore, J. R., Balestrin, A., & Perucia, A. (2014). Small-firm networks: hybrid arrangement or organizational form? *Organizações & Sociedade*, 21(69), 275-291.
- Wang, Y., & Krakover, S. (2008). Destination marketing: competition, cooperation or cooptation?. *International Journal of Contemporary Hospitality Management*, 20(2), 126-141.
- Wegner, D. (2011). Aprendizagem Interorganizacional: um estudo das redes horizontais de pequenas empresas. In: C. S. Antonello et al. (Eds). *Aprendizagem organizacional no Brasil* (pp. 537-564). Porto Alegre: Bookman.
- Wegner, D., & Mozzato, A. R. (2019). Shall we cooperate, or shall we compete? How network learning episodes influence strategic decisions in strategic networks. *International Journal of Management and Enterprise Development*, 18(3), 171-188.
- Wegner, D., Faccin, K., & Dolci, P. C. (2018). Opening the black box of small-firm networks: governance mechanisms and their impact on social capital. *International Journal of Entrepreneurship and Small Business*, 35(4), 559-578.
- Wincent, J., Thorgren, S., & Anokhin, S. (2014). Entrepreneurial orientation and network board diversity in network organizations. *Journal of Business Venturing*, 29(2), 327-344.
- Yin, R. K. (2015). *Estudo de Caso: Planejamento e métodos* (5. ed.). Porto Alegre: Bookman.
- Yström, A., Ollila, S., Agogué, M., & Coghlan, D. (2019). The role of a learning approach in building an interorganizational network aiming for collaborative innovation. *The Journal of Applied Behavioral Science*, 55(1), 27-49.
- Zhu, Q., Krikke, H., & Caniels, M. C. (2018). Supply chain integration: value creation through managing inter-organizational learning. *International Journal of Operations & Production Management*, 38(1), 211-229.

