

The relationship between strategy making and organizational learning

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Abstract

Purpose – This paper discusses the role of strategy making in organizational learning. By linking organizational learning and strategy-as-practice literatures, the objective of this research was to analyze how intertwined the cognitive process and strategic activities are in organizational learning.

Design/methodology/approach – The methodology used is a longitudinal qualitative single case study of one of the largest Brazilian companies in the power industry. The unit of analysis is the firm's growth strategy through mergers and acquisitions from 2003 to 2012.

Findings – The findings show that organizational learning involved four sequenced causal flows in which specific types of strategic activities contributed directly or indirectly to learning loops.

Originality/value – Our main contribution is to show that the implementation of strategic activities is the key to strategic renewal.

Keywords – Organizational learning; strategizing; strategy making; growth strategy; strategy-as-practice.

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I Introduction

Organization learning (OL) has a specific status in strategic management research (Argote, 2011). Broadly, OL aims to explain organizational changes that promote strategic renewal (Lee, Rittiner, & Szulanski, 2015). This perspective ascribes causal importance to linkages between cognition and action and vice versa, which are manifested at many organizational levels (Crossan, Lane, & White, 1999).

However, OL has been used as a general idea rather than a theoretical framework used to analyze the development of strategy (Narayanan, Zane, & Kemmerer, 2011). Consequently, the research that involves strategic issues and uses the OL perspective remains underdeveloped (Vijande, Sánchez, & Trespalacio, 2012). This is probably due to the ontological and epistemological struggle that blurs the learning perspective in the strategic research agenda.

On one hand, this agenda refers to OL as being closer to the cognitive perspective because of its focus on mental processes (Marshall, 2008). Strategy is acknowledged as a social and psychological process which enables organizations to develop new knowledge in order to promote renewal (Crossan, Maurer, & White, 2011). On the other hand, practice-based theorizing understands learning as practice situated. Strategy is seen as related to the social or cultural perspective within constructionist approaches. Traditionally, some authors have questioned whether the cognitive OL perspective and the practice-based one can be put together in the same framework. This is because the former focuses on knowledge structures as models of information processing, whereas the latter emphasizes social accomplishments that are situated (Chiva & Alegre, 2005).

This controversy is now considered somewhat overstated (Sillince & Shipton, 2013). For instance, Antonacopoulou and Chiva (2007) point out that OL reveals elasticity between interpretative and action-oriented schema. In

the same vein, Antonello and Godoy (2010) acknowledge the multiparadigmatic view of OL. Yet, Jarzabkowski, Spee, and Smets (2013) suggest that the strategy-as-practice (s-a-p) agenda should advance toward the knowledge processes and cognitive aspects of the strategy tools in use. Belmondo and Roussel (2015) state that some strategic tools enable people to analyze and generate new knowledge.

Taken altogether, such assertions reinforce Marshall's view (2008), which claims that cognitive and practical approaches can be reconciled. In the same vein, Kump, Moskaliuk, Cress, and Kimmerle (2015) recognize that OL involves the interplay between cognition, practices, and social mechanisms. In this view, OL seems like an "accordion" (Crossan, et al., 2011) involving organizational multilevels (individuals, groups, and the organization itself) and situated activities (Mozatto & Bittencourt, 2014). This means that OL does not exclude situated activities where the organizational multilevel is packed, and practice is placed at the foreground (Crossan, et al., 2011). Despite this conception, studies addressing multilevel OL and strategic activities are still scarce (Legnick-Hall & Inocencio-Gray, 2013). We take this gap into account and ask how strategy making is related to OL.

We argue that organizations are processes of becoming (Clegg, Kornberger, & Rhodes, 2005) and strategy is not an isolated part of organizations (Floyd & Lane, 2000). From the cognitive perspective and practice approach, here represented by s-a-p, strategic formulation and implementation are best conceptualized as a set of complex flows across people, activities, and sensing, which means strategizing (Hedberg & Wolff, 2001). This dynamic implies OL, which involves strategic renewal (Crossan, Lane, & White, 1999).

Reasoning in this way, we conducted a qualitative case study of the growth strategy of a Brazilian company in the energy industry from 2003 to 2012. Specifically, our research aimed to examine the relationship between organizational

levels, learning processes, and strategic activities. The main findings show that four different causal flows triggered OL. We identified the strategic activities in each flow, and found that they are contingent on each organizational level and play specific roles in the learning process. We point out that the strategic activities of implementation are the core of OL. Our main contribution is to show how cognitive processes and strategic activities are intertwined in OL.

We organize our paper into four sections. Following this introduction, we show how the cognitive and practical approaches are linked by the notion of strategizing. In the third section, we detail the research design and explain how we conducted our analysis. In the fourth section, we discuss the case study. Finally, we show the opportunities presented by our research and offer suggestions for future studies.

2 Theoretical background

Strategy development equated with systematic analysis and planning techniques has been criticized since the 1970s (Carter, Clegg, & Kornberger, 2008). It has been suggested that strategy formulation and strategy implementation should not be split into two different isolated steps (Leonardi, 2015). Strategy development can be better understood by its dynamics conceptualized as strategizing.

In s-a-p, strategizing is seen as the intersection between practices, praxis, and practitioners (Jarzabkowski, Balogun, & Seidl, 2007). In OL, this is called the process of “knowledge diffusion” (Hedberg & Wolff, 2001). However, these different words do not imply contradictory definitions because both perspectives conceive strategizing as iterative social processes that include people’s actions and their meanings.

According to s-a-p, strategizing represents the place where practices, praxis, and practitioners are interconnected. Practices are traditions, rules, and routines that guide and legitimate strategy (Jarzabkowski et al., 2007). However,

praxis refers to specific episodes, techniques, and tools involved in strategy making. It comprises all activities related to strategy formulation and implementation (Whittington, 2006).

Practices and praxis are open to interpretation according to how practitioners use them (Paroutis, Franco, & Papadopoulos, 2015). Practitioners interpret and make sense of their actions based on their experiences and available information. This process of sensemaking and sensegiving (Gioia & Chittipeddi, 1991) shows that meanings are crafted in the making (Rouleau, 2005). By recognizing the meanings and changing practices and praxis related to sensemaking and sensegiving, we highlight how strategy is built (Thomas & Ambrosini, 2015). This dynamic is also considered by OL.

In OL, strategizing is explained by models concerning the relationship between organization and environment. These models show that learning is different from adapting (Hedberg & Wolff, 2001). Learning is the development of a repertoire of meanings crafted during activities and organizational changes, whereas adaptation involves adjustments in either procedures or actions that do not necessarily affect meanings (Weick, 2012).

Whenever an organization interacts with its environment, problematic situations arise. However, the activities carried out by individuals are not totally affected by these stimuli. This is because the current system of activities might block this. Systems of activities need cracks in order to raise questions (Jarzabkowski et al., 2007). These questions may involve different organizational levels, such as individuals, groups, and the organization itself in reprogramming practice cycles that allow for organizational learning (Crossan et al., 1999). Organizational learning is the development of insights by people who make the strategy by comparing their actions and taking into account the past, present, and future (Fiol & Lyles, 1985). This definition considers organizations in an overlap between order and disorder (Hernes & Irgens, 2013),

and it evokes situations of learning related to strategizing (Clegg et al., 2005).

Hedberg and Wolff (2001) point to four learning situations. The first one refers to small adjustments in procedures or activities, that is, situations in which the business theory is not questioned. The optimization of production or logistics is an example of this type of learning. In the second learning situation, the business theory also remains the same, but new responses are devised. For instance, new market segments are exploited with old products and services. In the third type of learning situation, companies continue with old activities or routines because they cannot understand that the foundation of the business has changed. For example, a company takes old production facilities that are not accepted in a market, and moves them to another. In the fourth type of learning situation, there is a change not only in the business theory, but also

in the activities and procedures. One example is new routines for new markets.

These four learning situations carry the implicit idea that strategy can be the foundation for learning, since lessons make the experience understandable for those involved in the process (Weick, 2012). In this sense, there is no precedent between interpretation and action, whose flows might be described as feed-forward and feedback loops (Crossan et al., 1999). The feed-forward and feedback loops suggest that the strategy and the organization are not distinctive phenomena. Rather, they involve distributed and communicable knowledge validated and integrated into strategy making by practitioners, practices, and praxis. Thus, strategizing and organizing are intertwined (Hedberg & Wolff, 2001) and can be associated with a learning cycle (Crossan et al., 2011). See Figure 1.

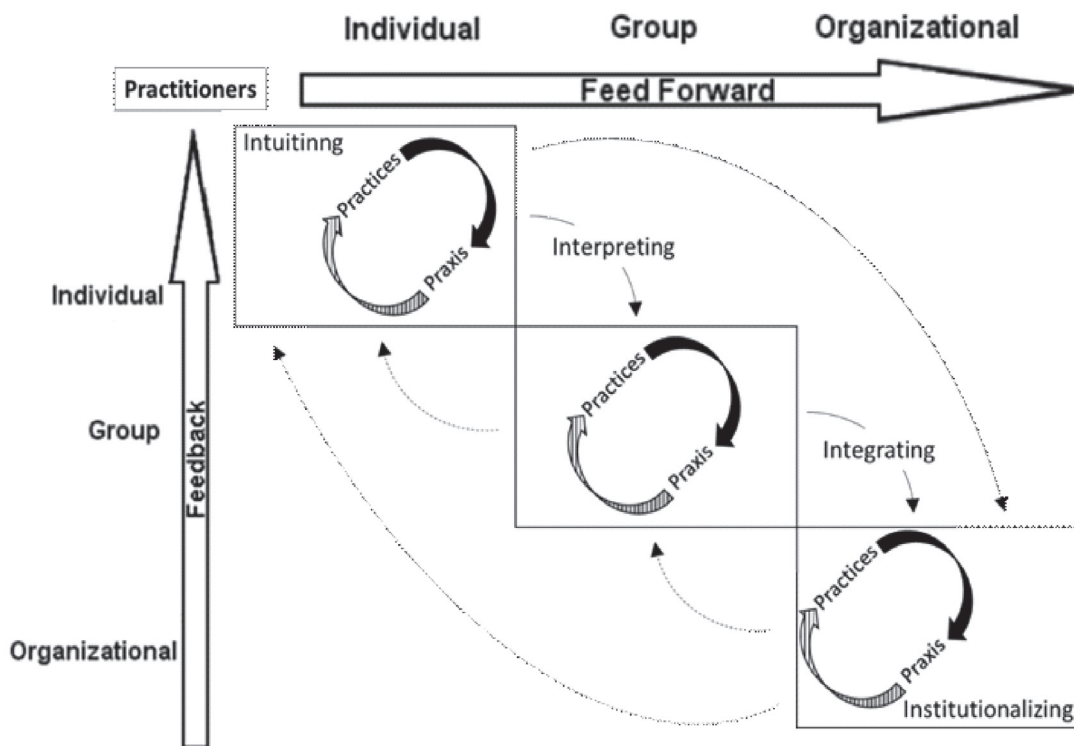


Figure 1. Learning Cycle

Figure 1 shows that feed-forward is related to the psychological processes of intuiting and interpreting what happens at the individual or group level (Crossan et al., 1999). These processes are viewed as mental, abstract, and intangible (Goldman, Schumpf, & Scott, 2017). They are not isolated from their context, nor are they carried out in a social vacuum. Rather, they unfold through ongoing activities (Jarzabkowski & Seidl, 2008), social relationships (Vuorinen, Hakala, Kohtamaki, & Uusitalo, 2017), and tools in use (Belmondo & Roussel, 2015). Since intuition and interpretation are manifested by actions, they can trigger organizations to change (Goldman, Schumpf, & Scott, 2017). The psychological processes are incorporated into systems, procedures, or strategies by integrating and institutionalizing them through social activities (Crossan et al., 2011).

Integrating and institutionalizing occur at different organizational levels (Crossan et al., 1999). They are processes of collective negotiation that enable reflection on past practices or the designing of future ones (Kump et al., 2015). Integrating knowledge means coordinating actions through dialogues as well as sharing activities between members involved in strategy work (Vuorinen et al., 2017). Knowledge integration can occur in an informal or formal way. Specifically, meetings, workshops, and plans are viewed as social mechanisms or praxis to foster conceptions of strategy (Jarzabkowski & Seidl, 2008). In this sense, strategy is brought to life by people (practitioners) involved in strategic praxis (Wolf & Floyd, 2017).

Since these actions are recurrent and meaningful, formal rules and routines will emerge, which means institutionalizing. Institutionalizing implies that concrete activities or praxis are defined (Wolf & Floyd, 2017), actions are specified, and ways of working are assured and supported by specific values (Lengnick-Hall & Inocencio-Gray, 2013). This process implies social practices, that is, knowledge incorporated into organizations by practices and situated activities (Crossan et al., 2011). Institutionalizing triggers

feedback loops that can affect the intuiting and interpreting of individuals and groups (Crossan et al., 1999).

The four related learning processes (intuiting, interpreting, integrating, and institutionalizing) express the collective organizational character in which organizational multilevels (individual, group, and organization) (Crossan et al., 2011) embrace underlying routines, norms (practices) (Jarzabkowski & Balogun, 2009), and concrete activities of strategy (praxis) (Wolf & Floyd, 2017). Therefore, strategizing and organizing are integrated into a theoretical framework that connects an organization's multilevels to the situated nature of OL (Crossan et al., 2011). This framework implies that organizational learning encompasses the cognitive psychological processes of intuiting and interpreting, as well as the social mechanisms of integrating and institutionalizing social activities into new practices (Kati & Sanna, 2013).

3 Research design and data collection

As our research question is how strategic making is related to organizational learning, we need a method that focuses on rich singular details about the context, which involves people, interactions, and situations. Therefore, we chose to conduct a qualitative single case study (Alvesson & Skoldberg, 2000). Our case is one of the largest companies in the Brazilian power industry. To preserve its identity, its fictitious name will be ECM.

In 2012, this company was number two in Latin America in terms of market value. This performance was due to the growth strategy of mergers and acquisitions that began in 2003. Since then, ECM has adopted strategic planning as a management model, and deployed it in different business units. We have examined the company's growth strategy because ECM has established growth until 2035 as an explicit aim, which implies a forward-looking vision for the whole organization.

The unit of analysis is the firm's growth strategy through mergers and acquisitions from 2003 to 2012. Thus, our study is essentially retrospective and time ordered. We traced the evolution of the strategy by retrieving information from selected areas that are critical to the company's growth. We have selected four divisions for data collection. They are: (1) the Business Development Board, which integrates the evaluation of activities and is responsible for equity management; (2) New Integration Management of Generation and Transmission, which coordinates greenfield projects; (3) Corporate Law Management, and (4) Financial Operations Management, which provides advisory support for legal and budgetary issues.

The data collection involved semi-structured interviews, company documents, and direct observation. The interviews were supported by a protocol addressing three separate topics. The first topic was the evolution of strategy and its implementation. The second one comprised the daily activities of the growth strategy and how people performed these activities. Finally, we asked about the changes the growth strategy had caused and their consequences for the employees and the organization. We have interviewed 21 key informants who were involved in the deployment of the strategic growth plan. They had different formal positions ranging from board chairman to technical ones. The average time spent on each interview was 50 minutes. We have recorded all interviews and transcribed them using verbatim.

We have also read 210 pages of company and public documents about financial markets/strategy. In these documents, we looked at the breaking points of the strategy, results of acquisitions, and partnership formation. Finally, one researcher conducted a direct observation by participating in a two-and-a-half-hour meeting exclusively focused on the development of ECM's growth strategy. In this meeting, he observed how people behave during strategy execution. The research notes consisted of strategic content matters, such as what had been decided and the

types of tools that had been devised to support the growth strategy.

3.1 Data analysis

The data analysis followed processual approaches by combining an inductive approach and theory development. There are two major phases of the analysis. In the first one, we organized raw data using the narrative construction technique (Ragin & Amoroso, 2011). This technique involves organizing stories wherein successive events are causally connected. These connections match the historical context, situation, and experiences reported by respondents as well as the records retrieved in documents.

The narrative began in 2003, when the strategy was deliberated, and finished in 2012, when we completed the data collection. We identified how the strategy making evolved over time and the actions and interactions that played a role in this evolution. The data is displayed in a causal map and includes 24 events (Figure 2). These events are grouped into six codes according to the quotes extracted from the interviews (Table 1). We labeled the codes as follows: (Ss) strategic stimuli: facts that trigger decisions; (Pr) internal practitioners: people inside the company who influenced the strategy development; (Pre) external practitioners: people outside the company who influenced the strategy development; (Oc) organizational change: changes in the company's organizational design; (Sp) strategic activities or praxis: things that helped people to carry out the growth strategy, such as strategic planning, strategy management, workshops, and meetings; and (Se) sensemaking: insights, interpretations, and discoveries taking place either collectively or individually.

In the analysis, we observed that the results of the acquisitions skyrocketed from 2006 to 2007. In other words, during the strategy making, the firm performed positively or negatively when it purchased assets or made greenfield investments. This led us to divide the strategy making into two periods. The first one is considered as the origin of

the growth strategy (2003-2006), and the second one is the consolidation of the growth strategy (2007-2012). We then progressed with the data analysis by examining flows in the reported events. We carried out inferential analysis, focusing

on how respondents ascribed meanings to the evolution of strategy. We identified that strategic activities or praxis were recognized in all those flows.

Table 1
Interview description

Code	Label	Quotes
Ss	Strategic stimuli	<p>“The main target of this change was to reduce the state’s public debt by increasing private investments in the sector.”</p> <p>“The federal government created the National Regulatory Agency (ANEEL).”</p>
Pr	Internal practitioners	<p>“Growth happened due to a new chairman. He had such an unusual view. He began to use strategic planning.”</p> <p>“The Board decided that the firm should grow.”</p> <p>“The Board formalized the strategic plan.”</p>
Pre	External practitioners	<p>“The new partnerships stimulated us to adopt market practices, thus increasing efficiency and competitiveness. They introduced new ideas.”</p> <p>“An external consultancy introduced the Balanced scorecard...”</p>
Oc	Organizational change	<p>“Our area is the result of the growth strategy. I think it is the embodiment of the strategic decision of the owner, the shareholder.”</p> <p>“Let me say that our area represents an evolution of strategy.”</p> <p>“The strategic committee was created.”</p> <p>“Another area was Financial Evaluation and Post Acquisition Management... also BDB.”</p>
Sp	Strategic praxis	<p>“Without this plan, our strategy would not have happened. This plan should be revised yearly in the strategic planning cycle.”</p> <p>“Our company began to pay attention to the market.”</p> <p>“This question (...) began in the workshop...”</p> <p>“The strategic planning made our company more aggressive.”</p> <p>“From BSC the strategy left the board and arrived at the core of the company.”</p> <p>“There were performance indicators for each area and management activity. There were also indicators for each map. This was very cool.”</p>
Se	Sensemaking	<p>“The president managed to view alternatives for the company precisely because of his vision and the strategic planning.”</p> <p>“The company’s board reinforced the vision of growth in workshops about action plans.”</p> <p>“The BSC indicators meant a lot for us.”</p> <p>“When we began using the performance indicators in our work, the strategy turned out to be clearer for us. We had goals to achieve, and this was useful. We could see how we contributed to strategy and why.”</p> <p>“We could understand the strategy and our roles in the strategy because of the implementation tools.”</p>

Then, we noticed that the praxes were classified as planning or implementation activities, and they also had specific values for the respondents. The activities are intertwined with symbolic meaning, referred to as sensemaking. We classified the answers that linked activities and symbolic meaning according to the theoretical framework of Crossan et al. (1999). In other words, we identified activities and symbolic meaning that were viewed as learning processes (intuiting,

interpreting, integrating, and institutionalizing). For example: A) intuiting: if interviewees attributed, to some activities, the contribution to people’s ability to see or recognize past patterns or analogous situations in the future; B) interpreting: how people explained visions, expectations, and insights to themselves, as well as to others, mentioning some activities that were involved; C) integrating: if there was the possibility of sharing visions, expectations, and insights through some

activities; D) institutionalizing: the formal rules that guided behavior and changes associated with some activities.

We also noticed that the interviewees talked about praxis or activities and linked them to several formal positions. Thus, we used the organizational level proposed in Crossan et al.'s (1999) framework, and divided it into three organizational levels: top, tactical, and operational. Finally, we assumed that organizational learning

occurred if the feed-forward and feedback learning loops involved every organizational level.

4 Findings

The strategy building is illustrated in Figure 2. In this figure, we can see 24 events which create four flows relating the cognitive process of learning to activities. As we have already mentioned, these events imply six codes (see Table 1).

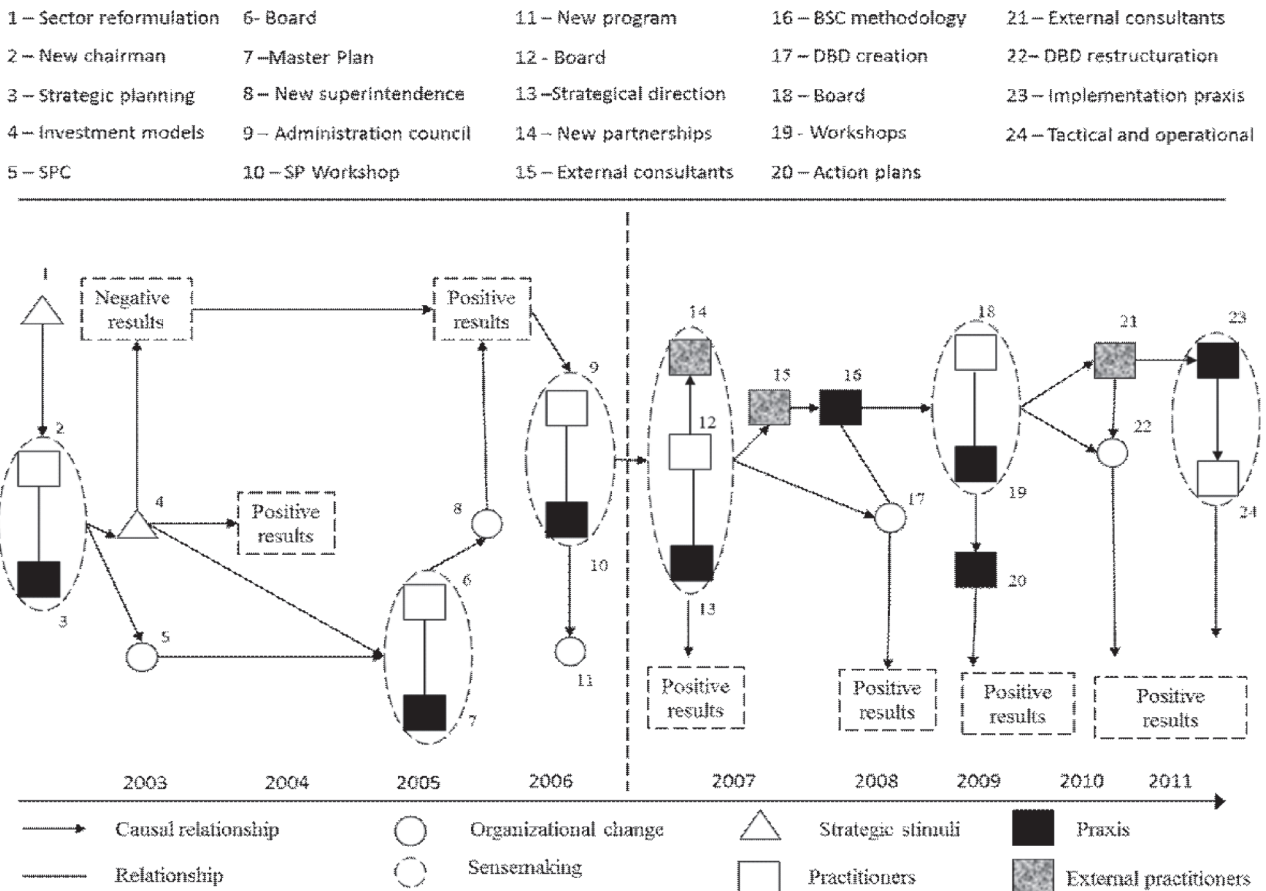


Figure 2. Causal map – events in strategy making process

4.1 The origins of the growth strategy period – 2003-2006

Strategic stimuli, practitioners, and praxis. ECM’s growth strategy dates back to the Brazilian electrical sector’s reformulation (1), which began in the second half of the 1990s. The reformulation decreased the state’s public debt

by increasing private investments in the sector (Ss). Because of new environmental demands, a new chairman was appointed (2). According to the interviewees, he was a “businessman” who used a new management style focused on the market (Pr). To do so, he introduced strategic planning as a tool to carry out the strategy (3). The importance of the strategic plan for ECM

is clear, as one respondent said, “the president managed to view alternatives for the company precisely because of the strategic planning” (Se). In 2003, during the strategic planning (Sp), the Board of Directors decided that the firm should grow through acquisitions and participation in greenfield auctions (4) (Pr). However, the initial bids were unsuccessful. According to the respondents, this was due to a “lack of expertise and knowledge about competitors, as well as aggressiveness in doing business” (Se).

Praxis and organizational changes.

In 2003, during the strategic planning, the growth vision emerged (Sp). At the same time, the strategic planning committee (SPC) (5) was created to “integrate several areas and execute the annual plan”, the interviewees said (Oc). Despite the initial difficulties, an acquisition was made. In 2004, ECM succeeded in acquiring a plant outside the state of Minas Gerais. In 2005, the company’s board (6) drafted the master plan (7) with guidelines for the strategic planning cycle until 2035 (Sp). According to the interviewees, “without this plan, the strategy would not have happened (Se). Thus, the company began to pay attention to the market” (Se).

The growth strategy was announced in this master plan, and was annually revised by the Financial Board and Investor Relationships. To fulfill its guidelines, the company’s board decided to create a new area called Financial Evaluation of New Ventures and Post-Acquisition Management (8) (Oc). As the respondents stated, without “the new structures, the strategy would not have been successful” (Oc). In 2005, after the creation of the new organizational structures, the results of acquisitions and greenfields investments improved. In 2006, the company bought new companies and gained greater market share. This success led to new problems for ECM, such as a lack of skills and abilities to manage the newly acquired businesses. In the strategic planning, Board of Director members (9) started questioning themselves and asking, “What are our weaknesses?” and “How can we manage these acquisitions?” (Se).

These questions first appeared during the 2006 workshop (10) in which CEOs and superintendents took part (Sp). They decided to create a program (11) for board members, managers, and people with succession potential. Therefore, in 2006, ECM was concerned about post-acquisition management.

4.2 Consolidation of the growth strategy period – 2007-2012

Practitioners and praxis. The positive results from the previous period strengthened the strategic objectives. In 2007, the growth strategy continued and was formalized by the board (12) (Pr) in the document Strategic Direction –2007-2011 Cycle (13) (Sp). In the same year, partnerships (14) were formed with private companies (Pre). According to the interviewees, “such partnerships brought new ideas to ECM” (Pr). “The company should become more competitive and more structured.” “The partners valued the strategic planning, and its systematic implementation made them stronger” (Sp). Also in 2007, an independent consultancy (15) (Pr) introduced the Balanced scorecard (BSC) methodology (16) (Sp). Through this methodology, the strategy follow-up was born (Sp). The BSC enabled people to make roadmaps and learn how each area contributed to the strategy (Se). Thus, “it was possible to understand the strategy as well as the change in established routines,” according to the interviewees (Sp, Se).

Praxis and organizational changes. In 2007, ECM created a structure called the Business Development Board (BDB) (17) to manage a new business (Oc). The growth strategy pushed forward with great results during 2008 and 2009. In 2009, the company’s board (18) reinforced the vision of growth in the half-yearly workshops (19) (Se), which unfolded in action plans (20) (Se, Sp). The following year, ECM made new acquisitions and greenfield investments. In 2011, a new consulting firm (21) was engaged to develop a new organizational design for the Business Development Board (BDB) (22).

The restructuring improved the process of post-acquisition management (Oc). According to the interviewees, “this change made it possible to make profits through operational efficiency because it achieved greater work integration and people were committed to the results” (Oc, Se). “The way of working changed, and the areas became more integrated by putting people together. The flow of information got better” (Oc, Se).

The new (BDB) structure resulted in changes in the current activities as well as in the relationships between employees. For the interviewees, the consequence of this restructuring was that “the growth strategy started to take part in daily work activities.” “The link between the areas, i.e., acquisition and post-acquisition management, allowed people to share ideas to define the strategy assumption and the business plan” (Se). Thus, in 2011, there were new acquisitions.

Practitioners and praxis. The consulting firm proposed indicators in each area for the implementation of strategic management (Pre), i.e., meetings and follow-ups on the results of implementation (23). This praxis was very important for tactical and operational levels (24) (Sp). According to the interviewees, employees “could understand the strategy and their roles in the strategy because of the tools of implementation” (Se).

In relation to the meetings, there were two different types. The first one was formal and had a specific audience, whereas the second one was informal. In these meetings, employees got together spontaneously to exchange information

about topics such as “proposals to change working procedures in financial reports” (Sp). Both types of meetings were seen as “essential” (Se).

Although these meetings are specific to each area, they do have some similar traits (Sp). The informal ones enabled individuals to “learn about each other’s experiences and exchange impressions about ongoing projects” (Se). Regarding the formal meetings, it is important to highlight the executive committee meetings and critics’ analyses. In each specific meeting, different groups were involved. They usually discussed work content and its impact on the strategy. All of the reported meetings are “valued because of their results toward strategy,” according to the respondents. The main meeting outcomes were taken to the Board of Directors for approval (Pr). This information was used during decision-making discussions. The formal meetings are part of what is called the “boss’ eye” (Se). In other words, the “boss’ eye” is identified with the company’s board (Pr), according to the interviewees.

4.3 Discussion

The growth strategy through mergers and acquisitions was a result of many flows that involved strategic stimuli, practitioners, praxis, organizational changes, and sensemaking. Sensemaking is close to the learning process (intuiting, interpreting, integrating, institutionalizing). Figure 3 illustrates the causal relationship as well as the intertwined interactions between strategic praxis and learning processes. We can see the matching between praxis and practitioners that enables organizational renewal.

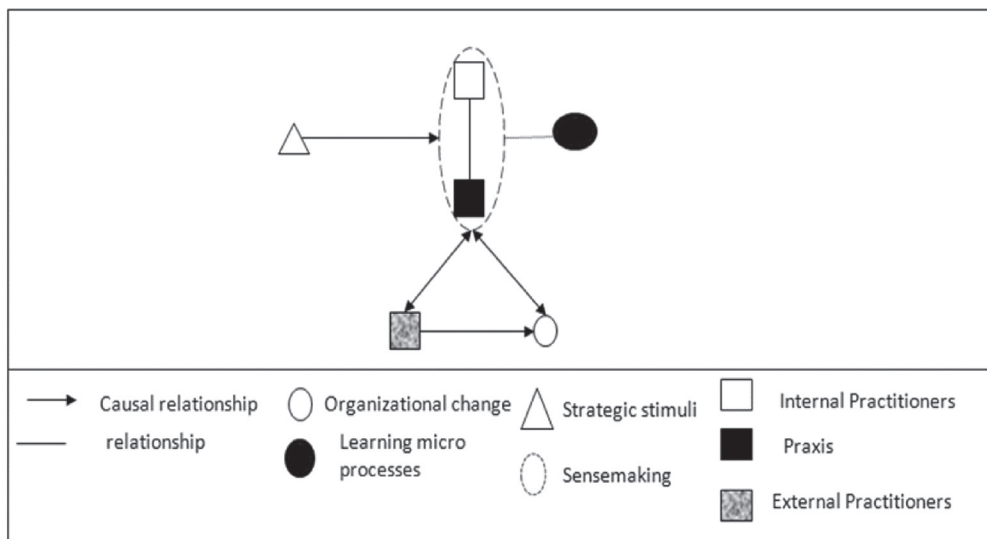


Figure 3. Summary of causal flows

Data shows that the growth strategy was the result of the company board’s response to the coercive changes in the environment. Over time, the strategic planning and implementation spread the idea of growth into the organizational multilevel. These activities involved sensemaking, which implied organizational learning. Therefore, organizational learning took place in the strategy

making, involving four sequenced causal flows that linked strategic praxis and learning processes (intuiting, interpreting, integrating, and institutionalizing) into learning loops. Figure 4 illustrates each flow, highlighting the type and role of strategic praxes and their relationship with learning processes.

Strategic praxis inside in each causal flows	Organizational dimension, type of praxis	Learning processes and praxis effects	Learning loops	Label
 1st	Top level Strategic planning Organizing commitment top level, guide organizational behavioural	Intuiting Interpreting Direct Institutionalizing	Feed-forward	Adaptation and reduction of uncertainty
 2nd	Tactical and operational Strategic planning Justify organizational changes	Interpreting Indirect Institutionalizing	Feed-forward	Transformation and recursiveness
 3rd	Tactical and operational Strategic planning Help to create social context	Interpreting Indirect	Feedback	Adaptation and unlearning
 4th	Tactical and operational Methodology of praxis implementation Strategic planning as social practice	Interpreting, intuiting Direct Institutionalizing	Feedback	Transformation and institutionalizing

Figure 4. Praxes and their relationship with organizational learning

4.3.1 *First causal flow: adaptation and reduction of uncertainty*

The environmental stimuli that arose from changes in the regulatory model for the energy power sector directly affected the composition of the company's board. That is, new practitioners of the strategy were appointed to leadership positions. The decision to invest in mergers and acquisitions implied a new business conception that emerged in the strategic planning. The board focused on market values and the idea of efficiency. In our case, strategic planning appears as the first praxis or activity incorporated into building the growth strategy. It drove top management to commit to the growth strategy by acquiring new assets. Strategic planning made the interpretations of the top level tangible, and legitimated organizational behavior. Hence, we call this flow "adaptation and reduction of uncertainty."

The first conclusion is that strategic planning proved to be a praxis capable of organizing interpretations at the top level and providing meaning to the organizational direction. This conclusion reinforces a previous finding of strategy research that shows that strategic planning fulfils important symbolic roles in an organization (Nordqvist & Melin, 2010) and impacts personnel commitment (Marko, Sascha, Marcus, & Mikko, 2012).

Acquisition performance strengthened the importance of the strategic plan as an instrument of management. Positive performances are examples of disturbing events that trigger questions about the capacity of the company to deal with acquisitions. Such questions implied sensemaking processes at the top level and tensions between organizing and strategizing (Whittington, 2003). They appeared for the first time in the workshops between the company's board and the superintendents. The workshops played an important role in the feed-forward learning loop. For example, they acted as learning spaces (Cuccurullo & Lega, 2011), enabling new interpretations at the top level. These results confirm previous findings, such as those

of Johnson, Prashantham, Floyd, and Bourque (2010) and Hodgkinson, Whittington, Johnson, & Schwarz (2006), who state that workshops are efficient means of developing strategy.

The literature also describes strategic planning as capable of disseminating common targets to the whole organization (Sirén & Kohtamäki, 2016). It generates commitment benefits if effectively communicated. Strategic planning facilitated the integration between different organizational units (Jarzabkowski & Balogun, 2009). Nevertheless, our data showed that the effects of integration of the strategic planning involving all the organizational dimensions were neither immediate nor direct. Our research shows that, for the strategic planning to have integration effects in various organizational dimensions, it needs to become a normal management practice and internally valued (Jarzabkowski & Balogun, 2009). Between the strategic planning and its value in the tactical and operational dimensions, sensemaking needed to be activated (Tracy, 2013). This means that the feed-forward loop does not always involve every learning process. For example, in this case, the integrating process is absent from the first flow. We also saw that the institutionalizing process does not trigger feedback loops to all organizational dimensions.

Thus, we reached the second conclusion, that the effects of strategic planning integration are contingent on how much they are part of the daily routine of the practitioners. This finding is consistent with Stensaker and Falkenberg (2007), who show that the gap between strategic intention and outcomes as a problem of commitment and loyalty can be reduced when individuals make sense of their work activities. Therefore, strategic planning should be meaningful to the people involved in strategy making (Kaplan, 2008). This case shows that to release the interpreting learning process at the tactical and operational levels, structural changes were necessary. Such changes appear in the second causal flow.

4.3.2 *Second causal flow: transformation and recursiveness*

The structural changes represented disturbing events that affected tactical and operational work activities and approximated strategy to their daily routine. The structural changes demonstrated the importance of the planning praxis and the growth objectives. At the same time, the strategic planning explained such changes. The strategic planning affected the work activities at the tactical and operational levels indirectly, though the structural changes did so directly. There were positive bidirectional recursive effects between the strategic planning and the structural changes. Therefore, this flow is called “transformation and recursiveness.”

The third conclusion is that work activities should be disturbed in order to trigger learning processes at all organizational levels as well as to produce feed-forward flows. The combination of strategic planning and structural changes contributes to giving meaning to managers' actions. The feed-forward loops were self-reinforced. This process was indirectly formed by sensegiving processes coming from the strategic planning and directly formed by sensemaking processes caused by organizational changes. Thus, organizational changes were responsible for promoting changes in work practices and began building new strategic visions for every part of the organization. This finding is consistent with the results of previous research, such as those of Paroutis and Pettigrew (2007) and Rouleau (2005). These authors point out that the success of strategic change hinges on how people interpret and enact the new guidelines during interactions embedded in their nearest contexts. In this case, this received the support of external practitioners, who are very important in the third causal flow.

4.3.3 *Third causal flow: adaptations and unlearning*

As our data demonstrated, external partnerships strengthened the strategic planning. The partnerships implied the incorporation

of external practitioners (Bingham & Davis, 2012) in strategy building. The partnerships and the structural changes were intertwined. Both contributed to the institutionalization of strategic planning. This happened because they ascribed values to top managers to organize management according to the long-term vision. Moreover, together they showed that strategic planning should be deployed in several organizational business units.

Thus, the strategic planning strengthened the change behavior, and it encouraged unlearning of old practices. Particularly, the partnership contributed to restructuring management around values of efficiency, and the strategic planning was a means of getting there. So this flow implies adaptation to the environment and, at the same time, unlearning through the introduction of new practices. So, we labeled the third causal flow “adaptation and unlearning.” The fourth conclusion is that the strategic planning coupled with structural changes contributed to creating a socially supportive context to spread the growth vision to feedback learning loops.

This conclusion is consistent with the literature that shows the influence of social context in promoting organizational learning (Fahy, Easterby-Smith, & Lervik, 2014). There was not any mention in our interviews that managers or employees used strategic objectives until the structural changes and the strategy implementation occurred. The literature explains that unlearning should be part of the institutionalizing learning process (Casey & Oliveira, 2011). Thus, the institutionalizing process involves changes in organizational memory. Our data reveals that strategic implementation activities are a means of unlearning and learning (Tsang & Zahra, 2008) at tactical and operational levels. This appeared in the fourth causal flow.

4.3.4 *Fourth causal flow: transformation and institutionalizing*

Up to 2007, changes in organizational structure and the introduction of planning as strategic practice did not mean a new way of

thinking and doing business transposed from the top level (board of directors) to the other dimensions of the company (managers and employees, for example). The top level's basic assumptions were incorporated into work routines because of the support of the consulting firm that implemented the BSC methodology.

The BSC methodology increased strategic planning as a social practice. Then, the growth vision was institutionalized at every level. This happened because individuals absorbed the strategy, starting by reflecting on their work activities (Sonenshein & Dholakia, 2012). Thus, we call this fourth causal flow "transformation and institutionalizing."

The fifth conclusion is that strategic activity implementation guaranteed feedback-learning loops because they enabled all types of learning processes throughout the organization. This finding is consistent with a number of studies that show how planned changes trigger sensemaking processes at several organizational levels (Stensaker & Falkenberg, 2007). For instance, Tracy (2013) states that strategic tools make individuals engage in the learning process.

We show that the strategic implementation methodology had positive, direct effects on the knowledge of the individuals (interpreting), and on the integration of the knowledge at the group level (integrating). Performance indicators provided people with more objective observations of managerial processes (Crittenden & Crittenden, 2008). They also helped individuals and groups from the different business units share daily problems more frequently. The implementation activities — more specifically the activities of control (indicators) (Kati & Sanna, 2013) and integration (meetings) (Jarzabkowski & Seidl, 2008) — affect all organizational dimensions directly.

The strategic activity implementation draws our attention to the importance of learning processes at the tactical and operational levels for feed-forward learning loops. Models of formal meetings at several hierarchical levels seemed

to foster knowledge sharing and contribute to organizational changes. However, the format of the meetings is quite hierarchical. Managers and employees do not have sufficient decision-making autonomy to make effective changes in the work procedures.

The respondents said there is no opportunity for improvisation in the day-to-day work to deal with errors, diversions, or strategy adjustments. They state that every type of change requires the acquiescence of superior hierarchical levels. Every change is subordinate to the Board of Directors (the boss' eye). The formal meetings between either managers or employees are equivalent to the informal ones. Both of them are more like exchanges of information than conceptualizations of new strategic proposals.

Formal and informal meetings in the tactical and operational dimensions influence the feed-forward learning within certain limits. That is, although the implementation activities through meetings directly affect the knowledge of individuals and groups, they indirectly affect the institutionalization of new organizational knowledge due to the interference of the decision locus (Jarzabkowski & Balogun, 2009). Therefore, strategic activity implementation is the core aspect of strategy institutionalization (Lê & Jarzabkowski, 2015). However, it is not necessarily the source for new strategic proposals. These proposals are dependent on power relations.

4.4 Contribution

More recently, some authors have acknowledged that the organizational learning perspective is not at odds with practice-based theorizing (Kump et al., 2015). In this vein, our research brings to the fore how intertwined strategic activities, learning processes, and learning loops are. Specifically, we found that OL comprised four different causal flows in strategy making. By disentangling these flows, we managed to identify where the activities are located, as well as their specific roles and effects over learning loops. This result is important because the literature

has not yet shown how situated activities may have an impact on strategic results (Jarzabkowski & Spee, 2009), nor the role of activities in the learning process (Crossan et al., 2011). We saw that strategic planning is a good activity for triggering feed-forward loops and helping organizations adapt their environments. But just making strategy explicit at the organizational levels through strategic planning does not mean sharing understanding or establishing learning processes in every organizational dimension, i.e., top and lower levels.

On the one hand, strategic planning activities directly influence the feed-forward loops by organizing interpretative learning processes and encouraging organizational behavior for change at the top level. On the other hand, strategic planning needs to be valued internally to ensure feed-forward learning loops; it also does not play the same role at tactical or operational levels. Thus, strategic planning activities have different effects in the feed-forward learning loops. Here lies the first contribution of our study. We unveil different waves of feed-forward learning loops that self-reinforce each other, wherein strategic activities play different roles in specific learning processes.

Strategic planning triggers feed-forward loops, but their institutionalization at the organizational level does not necessarily promote feedback loops. This probably happens because of temporal dimensions (Berends & Antonacoupoulou, 2014) that break apart the two learning loops (Hydle, 2015). That is, time influences the relationship between the learning loops (Rowe, 2015). The relationship between institutionalizing and interpreting is problematic (Crossan et al., 1999). So, we suggest that the temporal lags between feed-forward and feedback learning loops across levels and organizational dimensions can be filled by strategic implementation activities. Thus, strategic planning activities are not a core element that directly affects all interpreting processes available in an organization. The learning feedback loops are dependent on strategic activities of implementation.

Yet, in relation to feedback learning loops, there are also waves too. These waves indicate that we should not conflate systems, structures, routines, and strategies as belonging to the same level of the institutionalizing process. Rather, an organization comprises layers. The institutionalizing process involves each layer through specific strategic activities. Specifically, institutionalizing strategic thinking requires an adaptation of working activities and disturbance events inside the organization.

Last, but not least, we advocate that, in the path from one learning process to another, there are specific strategic activities that join each organizational level. Activities of strategic control and integration mechanisms seem to influence every learning process, while planning activities influence only some of them. We conclude that strategic implementation is the most important activity to comprise sequenced learning processes, involving the tension between feed-forward and feedback learning loops.

5 Final remarks

Our research is an attempt to expand the literature on strategy related to the learning perspective. We addressed the relationship between organizational levels, learning processes, and strategic activities related to the growth strategy process. We concluded that there were four sequenced causal flows that link strategic activities and learning processes into learning loops. These flows occurred in waves in which strategic activities were contingent on each multilevel of the organization and played specific roles in the learning processes. We found that the strategic planning activities are not praxes that affect feed-forward learning loops at every organizational level. Yet, the praxis of strategy implementation can complete the OL cycle. That is to say, the strategic implementation activities involve the tension between exploration and exploitation at every organizational level. In this sense, we can conclude that the praxis of implementation is at the core of strategic renewal.

However, our research has some limitations. First, our findings are based on a single case and our sample only included those who were directly involved in the growth strategy. Second, we should point out that, when past facts or situations need to be retrieved, people tend to refer to their preferences and locate them in the short term. Thus, we might have missed some aspects that were important for understanding specific realities in organizational learning.

As far as we are concerned, these limitations do not weaken our conclusions. However, they do need to be considered in future research. For example, other studies could identify whether the same causal flows occur in different growth strategies and whether strategic activities play the same role in multilevel organizations. It would be good to compare different cases to advance our understanding of organizational learning. Provided we examine organizational learning from multiple perspectives, we will be taking a step toward a deeper understanding of strategic renewal.

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Appendix A – Interview protocol

Interviewee profile

Organizational position

Organizational unit

Role in the strategy making

Topic 1 – Strategy evolution

1. What do you understand about the growth strategy of business in the transmission, generation and distribution sectors? When did this strategy begin in the company and in your sector? Why?
2. Explain how this strategy has evolved over time. What were the main situations involved in this process?
3. How do you perceive the ECM strategy position with regard to other companies in its economic sector? Why?

Topic 2 – Daily activities of growth strategy

1. How did the strategic growth objective influence your sector? Explain how your sector helped to achieve this objective. How did you evaluate and relate the strategy deployment?
2. What has changed in the daily life in your sector to face the strategy? Give examples of how the daily life in your sector influenced the growth strategy.
3. How did your area participate in the growth strategy? Are there are specific follow-up meetings or other activities related to it? Are they important? Why? Give us some examples.
4. Who are the professionals responsible for the implementation of the growth strategy in your sector? How do they manage it? Explain.
5. What are the difficulties to carry out what was planned? What makes it easier to carry out the strategy? When and how did this situation happen? Why?

Topic 3 – Knowledge institutionalization and renewal

1. During the process of merger and acquisition in auctions, were there surprising situations that demanded unplanned decisions? Was there any improvisation?
2. Give examples.
3. Do you think the personnel experiences in your sector or the company influence the strategy implementation? Explain.
4. Do you consider that there have been changes in ECM and in your area since the strategy began to be implemented? What were those changes and when did they take place? Why did it happen? What were their consequences?
5. What is your evaluation about those changes? Was there any situation that did not change during the strategy implementation? Explain.
6. Have the implemented changes raised the level of knowledge about the strategy and implementation practices? Has there been any learning? What kind of learning? Give examples.

Appendix B – Document source

Nº	Title	Type of document	Document year
1	Internal standard NO-04.09 - 26/03/2003	Institutional document	2003
2	Provision for loss in compliance	Notice to market – Web internal page document	2003
3	Indicated New Board of Directors of Cemig	Notice to market – Web internal page document	2003
4	Approval of the master plan for 30 years	Notice to market – Web internal page document	2003
5	Deverticalization project – announcement to suppliers	Notice to market – Web internal page document	2004
6	Press release	Notice to market – Web internal page document	2004
7	Search for partners to participate in Aneel auction	Notice to market – Web internal page document	2005
8	Construction of transmission line in Chile	Notice to market – Web internal page document	2005
9	Purchase option of Schahin Holding S.A. shares	Notice to market – Web internal page document	2006
10	Acquisition, together with other partners, of Schahin's shares in Electric Power Transmission Companies.	Notice to market – Web internal page document	2006
12	Strategies to ensure sustained growth	Notice to market – Web internal page document	2006
13	Relevant facts	Notice to market – Web internal page document	2007
14	Strategic planning cycle – 2006-2010	Institutional document	2007
15	Strategic Direction CEMIG - Cycle 2007-2011	Institutional document	2007
16	Vision and action June	Institutional document	2009
17	Vision and action July	Institutional document	2009
18	Relevant facts	Notice to market – Web internal page document	2009
19	Vision and action July	Notice to market – Web internal page document	2010
20	Vision and action May	Institutional document	2012
21	Internal communication	Institutional document	2012

Notes

- ¹ A preliminary version of this article was submitted to the Academy of Management in Atlanta, USA, in August 2017.
- ² Article based on data presented in the dissertation “O PAPEL DE PRÁTICAS DE ESTRATÉGIA NO APRENDIZADO ORGANIZACIONAL: Um estudo de caso em uma empresa do setor elétrico” of Ana Thereza Novaes Magalhães, mentored by Ângela França Versiani, Programa de Pós-Graduação em Administração, Pontifícia Universidade Católica – PUC, Belo Horizonte, 2012.

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Contribution of each author

Contribution	Angela França Versiani	Sérgio Fernando Loureiro Rezende	Ana Thereza Novaes Magalhães	Samir Lófti Vaz
1. Definition of research problem	√			
2. Development of hypotheses or research questions (empirical studies)	√		√	
3. Development of theoretical propositions (theoretical work)	√			√
4. Theoretical foundation / Literature review	√	√		
5. Definition of methodological procedures	√			
6. Data collection			√	
7. Statistical analysis				
8. Analysis and interpretation of data	√	√		√
9. Critical revision of the manuscript	√	√	√	
10. Manuscript writing	√	√		