

## INVESTIGATION OF THE PRESENCE OF ELEMENTS OF PERFORMANCE MANAGEMENT IN THE GENERATION OF ORGANIZATIONAL LEARNING: A CASE STUDY

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### ABSTRACT

This research investigated the presence of the elements of Performance Management (PM) in the generation of Organizational Learning, through the perception of stakeholders in the process. It is a case study, with interviews of three people directly involved with the design, implementation, use and feedback of the system. The semi-structured interviews were guided by the basic literature that points out the presence of the elements. Analyzing the speeches of the interviewees, it appears that the PM system was built in a continuous cycle of reflection, since previous strategic planning experiences did not prosper. From the interviewees' perception, the system enabled the organization to become aware of reality, detect and correct existing and, previously, unknown problems. Thus, it is possible to think of improvement actions. In addition, it was evident that communication permeated the entire process of PM, because it explained what was desired with the construction of metrics and directed the goal setting. These, encouraged the use of information for management and guaranteed timely feedback, allowing the comparison of the results obtained with those expected, defined by the goals set. This feedback provided the participation of all stakeholders, making it possible for the organization to verify the achievement of its strategic objectives, periodically feedback the system, reviewing its strategy, and reviewing its beliefs, behaviors and actions, making the organization more prepared for environmental changes. Finally, it can be concluded that learning is perceived by managers when they are able to show what the organization wanted to achieve, reflect on the adequacy of the objectives pursued and demonstrate that collaboration occurs in improving routines already developed in the organization. Also, when they are able to identify what is important to measure, parameterize the goals with these data, and provide feedback, in a way that makes it possible to analyze the results, comparing them with the established goals. And above all, when it is possible to trust information to guide decisions.

**Keywords:** Performance management. Organizational learning. Generating elements of learning.

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## 1 INTRODUCTION

The Organizational Performance Management helps to improve the activities of organizations (Amaratunga & Baldry, 2002), enabling their development. Historically, evaluation has been concerned with measurement through the creation of indicators to control and monitor the achievement of goals at strategic, tactical, operational and individual levels (Brudan, 2010). These indicators are responsible for implementing strategies, linking organizational actions (Amaratunga & Baldry, 2002; Oliver, 2009; Brudan, 2010); guide behaviors to achieve satisfactory performance; and to identify when and where to intervene and support the decisions to be taken (Amaratunga & Baldry, 2002; Brudan, 2010; Canonico *et al.*, 2015). However, it is argued that, in addition to measuring, Performance Management (PM) systems should be concerned with the usefulness of information to management (Amaratunga & Baldry, 2002; Bititci, Garengo, Ates, & Nudurupati, 2015).

In addition, a well-structured evaluation system provides clear communication of strategic objectives (Amaratunga & Baldry, 2002; Yeo, 2003b; Brudan, 2010; Canonico *et al.*, 2015), generates necessary information for feedback (Buckmaster, 1999; Batac & Carassus, 2009; Oliver, 2009) and, through this, managers reveal their values and preferences to those interested in the organization (Simons, 1990). This communication makes it possible to observe the strategic objectives of the organization's culture (Oliver, 2009), making PM important to the organization's management.

However, it is a challenge for the organization's management to develop a system that allows it to measure performance, define and clarify goals, allocate and prioritize resources, guide employees and managers and communicate performance results (Amaratunga, Baldry, & Sarshar, 2000). These challenges drive the search for alternatives to measure and manage the performance of an organization that promotes performance control and, above all, facilitates learning for continuous improvement.

PM operated by Organizational Learning (OL) mechanisms allows organizations to collect, analyze, store, disseminate and use relevant information (Oliver, 2009; Oyadomari, Pedrique, Bido, & Rezende, 2014; Pekkola, Hildén, & Rämö, 2015; Cucchi & Barcellos, 2018). It prepares the organization to be sensitive to changes in external and internal environments (Amaratunga & Baldry, 2002; Bido, Godoy, Araujo, & Louback, 2010) and to review and reorient internal objectives when changes in the environment are significant (Amaratunga & Baldry, 2002; Cucchi & Barcellos, 2018).

In PM, OL has the potential to help people and organizations to better understand the relationship between organizational and individual performance in a holistic way (Brudan, 2010). For this, it lacks appropriate evaluation systems (Batac & Carassus, 2009). It also argues that the existence of controls encourages the exchange, distribution of information and knowledge between employees and leaders (Batac & Carassus, 2009). However, the role of PM must seek not only to control, but also to learn (Bititci *et al.*, 2015), in order for the organization to incorporate learning to improve individual and organizational performance and contribute to improving management. In addition, it is argued that OL is essential for the survival and growth of organizations (Leitch, Harrison, Burgoyne, & Blanter, 1996). It has been described as a process of: error detection and correction and problem solving (Argyris, 1977a; Senge, 1990; Kloot, 1997; Buckmaster, 1999); identification and adaptation to environmental changes (Argyris, 1977a; Senge, 1990; Kloot, 1997; Buckmaster, 1999; Bido *et al.*, 2010); and development and improvement of actions through knowledge and understanding of their reality (Oliver, 2009; Pekkola *et al.*, 2015).

Based on this knowledge, the OL, experienced, guides actions so that the organization's mission, objectives and goals are achieved (Amaratunga *et al.*, 2000; Amaratunga & Baldry, 2002; Brudan, 2010) and guarantee competitiveness (Amaratunga *et al.*, 2000; Shurafa & Mohamed, 2016). The opportunity is presented to discuss how past results were achieved, but also whether their expectations for the future remain directed to the established strategies, as well

as, feedback to support decision making at all levels of the organization (Amaratunga & Baldry, 2002; Canonico *et al.*, 2015). As presented, learning has many benefits for the organization.

It is pointed out that learning occurs when a unit acquires knowledge that it recognizes as potentially useful for the organization (Buckmaster, 1999) and clearly communicates the actions and/or behaviors that the members of the organization must pursue or avoid (Amaratunga *et al.*, 2000; Bido, *et al.*, 2010; Shurafa & Mohamed, 2016), becoming a continuous cycle of experimentation (Senge & Sterman, 1992), reflection and action (Yeo, 2003a; Pekkola *et al.*, 2015). Senge and Sterman (1992) argue that reflection is the central learning process.

With reflection, organizational learning develops in the understanding of the changes that occur in the external environment and then promote the adaptation of beliefs and behaviors to face these changes, with new ways of thinking and attitudes, and the establishment of a new standard behavior (Yeo, 2003a; Bido *et al.*, 2010). Thus, organizations adjust to reality and use knowledge to improve the environment and become more flexible to anticipate and respond to the necessary changes in the strategic direction (Simons, 1990; Amaratunga & Baldry, 2002; Shurafa & Mohamed, 2016) and demonstrate what strategies and goals have been achieved (Buckmaster, 1999).

However, reflection and OL are not a collective process, but are developed in individual members (Leitch *et al.*, 1996; Argote, 2011). Organizations only learn through the experience and actions of individuals (Leitch *et al.*, 1996; Oliver, 2009; Argote, 2011). Individual learning involves the processes of changes in beliefs (cognition), behavior and routines (Coad, 1996; Argote, 2011). Organizational learning requires individual learning, but it is influenced by a broader set of social, political and structural variables. It involves sharing experiences and knowledge, beliefs or assumptions between individuals (Kloot, 1997; Oliver, 2009; Bido *et al.*, 2010), to respond positively and creatively to challenges, improve skills, master tasks they perform and develop new skills (Coad, 1996).

In addition to involving people (Amaratunga *et al.*, 2000), their knowledge and understanding of the context (Bititci *et al.*, 2015), OL develops in the improvement of processes, in the development of support systems and in the strengthening of the culture of organization (Amaratunga *et al.*, 2000). For this, the learning experienced by the individual must be made available in the organization so that other members can access it (Argyris, 1977b; Argote, 2011). In this way, learning will be organizational if it enables collective knowledge acquisition, modifies the entity's behavior (Batac & Carassus, 2009), provides continuous improvement and incorporation of this knowledge within the organization (Oliver, 2009).

Based on the above, it is clear that OL develops in AD, manifesting itself in its operationalization, in the use of information in management and being used for feedback to the system (Canonico *et al.*, 2015). These processes improve the organizational capacities that, added to individual experiences, make learning happen.

Thus, the question that guides this study emerges: how are the elements of AD in the generation of OL perceived by the managers involved? In order to seek an answer to this question, this research aims to investigate the presence of PM elements in the generation of OL, based on the perception of people involved in the design, implementation and feedback of an organization's PM system.

This research is important because, based on the theoretical construct that points to PM as an element that generates organizational learning, it is intended to analyze theory in practice, focusing on the perception of stakeholders in the design, use and feedback of the PM system. It is original, as it proposes to verify the perception of the elements of PM and OL in an empirical study, in an organization that already has a formalized PM system. It is viable due to the access to the people to be interviewed, provided by the organization under study. This research is limited to the realization of a single case study with interviews of people involved in the design, use and feedback of the PM system used by the organization, as well as the perception and learning experienced by the interviewees.

## 2 THEORETICAL FRAMEWORK

PM aims to implement the organizational strategy (Bititci *et al.*, 2015; Canonico *et al.*, 2015). In this regard, it promotes learning in the organization, fundamentally by establishing strategic objectives (Amaratunga *et al.*, 2000; Yeo, 2003b; Batac & Carassus, 2009; Bititci *et al.*, 2015). It is the role of the PM to build metrics to measure the identified aspects, in order to operationalize the strategic objectives (Buckmaster, 1999; Amaratunga *et al.*, 2000; Yeo, 2003b; Moynihan, 2005; Batac & Carassus, 2009; Wouters, 2009; Bititci *et al.*, 2015). Wouters (2009, p. 69) points out that "performance measures need to adapt to the context in which they are used and cannot be generic or pass from one organization to another".

This is noticeable by the need to align the metrics with the organization's mission and vision (Yeo, 2003a), so the measures must reflect the organization's specificities and, thus, allow it to have control over results and directions to be taken (Amaratunga & Baldry, 2002; Bititci *et al.*, 2015; Canonico *et al.*, 2015; Shurafa & Mohamed, 2016; Valmorbida & Ensslin, 2016), with the monitoring of established metrics that verify the alignment or not to the strategy (Amaratunga *et al.*, 2000; Batac & Carassus, 2009; Bititci *et al.*, 2015). This analysis results in the reevaluation of the strategy (Amaratunga & Baldry, 2002; Yeo, 2003a, 2003b; Canonico *et al.*, 2015) and the established metrics. For this, it needs the organization to reflect and analyze the performance measures used (Yeo, 2003a; Wouters, 2009). This reflection signals the learning experience experienced by the organization (Yeo, 2002; Yeo, 2003a, 2003b).

The literature points out that the participation and involvement of all stakeholders is another factor that generates learning (Argyris, 1977b; Amaratunga & Baldry, 2002; Yeo, 2003b; Argote, 2011). Above all, the involvement of leaders and senior executives is paramount in the design and implementation of PM systems (Simons, 1990; Amaratunga & Baldry, 2002), as they are the ones who legitimize the objectives to be pursued (Yeo, 2002). However, for there to be effective use of the system and the information generated, the participation of employees must be made possible ((Bititci *et al.*, 2015). All members of a company must have the chance to participate, discuss and contribute to the main political decisions (Leitch *et al.*, 1996), to share ideas, suggestions for actions to be taken (Moynihan, 2005), in addition to transmitting the idea that everyone in the organization is responsible for performance (Yeo, 2002; Yeo, 2003b).

Another factor pointed out as a driver of OL is the communication of strategic objectives, metrics and performance goals (Argyris, 1977a, 1977b; Senge & Sterman, 1992; Leitch *et al.*, 1996; Buckmaster, 1999; Amaratunga & Baldry, 2002; Moynihan, 2005; Brudan, 2010; Argote, 2011). With it, the organization shows employees what is considered important and the desired performance levels (Yeo, 2002; Yeo, 2003a, 2003b; Oliver, 2009; Pekkola *et al.*, 2015), directing efforts towards the development of appropriate actions reaching strategic objectives (Leitch *et al.*, 1996). When different types of information are shared, the problems of informational asymmetry in the organization are reduced (Simons, 1990; Kloot, 1997), opening the possibility of promoting continuous and ordered dialogues (Leitch *et al.*, 1996) that allow the improvement of participatory organizational management.

In addition to communication, goal setting in PM also produces learning for the organization (Amaratunga & Baldry, 2002; Moynihan, 2005; Batac & Carassus, 2009; Brudan, 2010), by setting individual or collective performance goals that challenge individuals the achievement of objectives (Oliver, 2009), or by reflection to identify performance standards or goals to be achieved (Pekkola *et al.*, 2015).

Transparency and accountability for achieving the established objectives (Amaratunga & Baldry, 2002) are also associated with organizational learning. This can be achieved with the transparent goal setting, objectives and expected results, showing the logic of the system's operation, the expected results and the control mechanisms (Buckmaster, 1999; Yeo, 2002; Wouters, 2009). This makes it possible to expand the contribution to the improvement of the system in improving data collection, analysis, storage, dissemination and use of information

relevant to the organization (Leitch *et al.*, 1996; Moynihan, 2005). Feedback in PM is related to the periodic review of objectives and criteria (metrics) that they use to measure performance, adjusting or redesigning metrics (Buckmaster, 1999; Batac & Carassus, 2009; Oliver, 2009; Wouters, 2009), testing consistency systems, so that they contemplate their values, or in response to environmental changes (Buckmaster, 1999; Wouters, 2009; Bititci *et al.*, 2015). The comparison of results in PM is related to the analysis as to the expected results in comparison with the results obtained (Argyris, 1977a; Argyris, 1977b; Senge & Sterman, 1992; Oliver, 2009), the real performance with the desired (Shurafa & Mohamed, 2016), with benchmarking performance (Batac & Carassus, 2009) and even comparison with acceptable standard and analysis of variance of performance over time (Oliver, 2009; Canonico *et al.*, 2015; Pekkola *et al.*, 2015).

Learning is also developed in the analysis of metrics and in the respective feedback on performance to management and employees, collecting and analyzing results data to support management, evaluating how well the organization is progressing towards predetermined objectives (Senge & Sterman, 1992; Buckmaster, 1999; Amaratunga *et al.*, 2000; Amaratunga & Baldry, 2002; Moynihan, 2005) and also identify strengths and weaknesses and underperforming areas (Amaratunga & Baldry, 2002; Bititci *et al.*, 2015; Canonico *et al.*, 2015; Valmorbida & Ensslin, 2016).

PM is concerned not only with what is causing problems, but also with what are the consequences of underperformance and what can be done to improve them (Oliver, 2009; Wouters, 2009), aiming at follow-up and the achievement of individual and organizational goals (Brudan, 2010), taking necessary measures for improvement (Shurafa & Mohamed, 2016; Amaratunga & Baldry, 2002); always observing the changes that occur in the external environment (Yeo, 2002). As the environment undergoes changes, the organization must adapt to these changes, modifying its behavior to meet internal and external demands (Kloot, 1997; Yeo, 2002), which occurs with adaptation of beliefs and behaviors, especially with the goals and metrics of PM that, when disseminated in the organization, assist in guiding the behaviors that should be followed and avoided (Shurafa & Mohamed, 2016), directing and influencing behaviors in order to achieve adequate performance (Coad, 1996; Leitch *et al.*, 1996; Canonico *et al.*, 2015). OL also occurs in the generation of information that supports decisions (Kloot, 1997; Bititci *et al.*, 2015; Valmorbida & Ensslin, 2016), in the use of information to justify the decisions taken and to direct the improvement measures formulated, if the goals are not met (Oliver, 2009; Valmorbida & Ensslin, 2016), justifying the use of resources; and in the decentralization of decisions (Amaratunga & Baldry, 2002), it delegates responsibilities to employees.

Based on the analysis made, it is possible to state that there is complementarity/recursion between PM and learning occurred in the organization. It is evident in communication, feedback and strategic review and in providing opportunities for people's participation (Valmorbida & Ensslin, 2016).

It is clear that OL permeates the entire process of PM, develops throughout the process and promotes reflection for feedback from the system. At all stages, it can be learned and improved processes with the learning occurred. It also contributes to the system's long-term adherence.

### **3 METHODOLOGY**

The research follows an interpretative methodological approach (Lukka & Modell, 2010; Sampieri, Collado & Lucio, 2013), which privileges people's perception, the ontological world view and subjectivity in actions and decisions. To capture this perception, this research uses semi-structured interviews to collect data. Thus, it has a qualitative focus (Sampieri *et al.*, 2013), as this is selected when seeking to understand the interviewees' perspective on the phenomena.

The data are collected by means of poorly structured techniques and treated by means of interpretative analyzes (Vergara, 2012). Therefore, the results obtained are not generalizable. Semi-structured interviews are based on a script of subjects or questions, and the interviewer is free to ask other questions to obtain more information (that is, not all questions are predetermined) (Sampieri *et al.*, 2013).

It should be noted that, in qualitative research, the researcher becomes an instrument of data collection (Lukka & Modell, 2010; Twining, Heller, Nussbaum, & Tsai, 2016). This is noticeable during the interview, in which insights may occur to recompose the script (Vergara, 2009), enriching the collection of information, as well as data analysis, which also involves the perception of what the researchers saw and heard during the interviews, and is guided by the researcher's interpretations (Alvesson, 2003; Lukka & Modell, 2010).

The research was developed through interviews guided by an Ethical Research Protocol previously analyzed, discussed and agreed between the organization and the researchers. It was submitted for approval by the Research Ethics Committee of the University of origin of the researchers. The collected data were treated in an aggregated, comparative and informative way, without mentioning the name of the organization and/or the participants, who were called at the moment of transcription as: "Interviewee A"; "Interviewee B" and "Interviewee C", without also identifying their roles. Thus, it is intended to avoid any damage or discomfort to research's stakeholders. All interviews were recorded to facilitate the registration, as well as to guarantee the fidelity to the comments made. Only the researchers had access to recorded interviews and transcriptions, ensuring confidentiality and the content discussed.

The location was chosen for convenience and accessibility (Sampieri *et al.*, 2013). Among the organizations known to the researchers, it was sought an organization that had already implemented an PM system some time ago, as it needed to have gone through all the stages: design, implementation, use and feedback. The sample of this research was carried out by selecting key informants, who participated in the construction and review stages of the PM system. After approval of the research, the organization was asked to indicate a person involved ("Interviewee A"). This indicated a second ("Interviewee B") and both cited a third ("Interviewee C"). With the acceptance, the interviews were previously scheduled, which were carried out on the dates and places established by the interviewees.

Interviewee	Occupation	Strategy <i>l</i>
A	Collaborator responsible for the development, implementation and follow-up of the PM system.	Nominated by the organization. Cited interviewee B and C.
B	Senior employee of interviewee A, directly involved with the conception of the PM system.	Cited by interviewee A and C. Cited interviewee A and C.
C	Consultant on the methodology used to build the PM system.	Cited by interviewee A and B.

**Figure 1.** List of interviewees and their relationship

Source: Elaborated by the authors.

Initially, the participants talked about their training and experience in the organization, and then they were asked about the questions proposed by the researchers (previously prepared script). Due to the depth of the answers, it is estimated that each interview lasted an average of ninety minutes and all were recorded. The scheduling of the interviews was approved by the organization according to the availability of the interviewees, so that it did not impact the normality of the activities of the participants and the organization. Interviewees were made aware that they had the right to not answer any questions asked without justification.

After the transcripts, interviewees were given an opportunity to read the interview and make changes to the answers given, if the transcript could make them uncomfortable. However, this did not happen.

The interviews were conducted based on the script presented in Figure 2 and were grouped by the PM element identified as a promoter of organizational learning. It should be noted that the questions were prepared based on the results of the works found in the literature.

The collection and analysis of data from this research are subjective (Twining *et al.*, 2016). The answers presented to each of the questions by the interviewees and compared with the basic literature will be analyzed, in order to verify if they confirm what is pointed out by the literature or not. For this, clippings of the speeches of the interviewees will be presented.

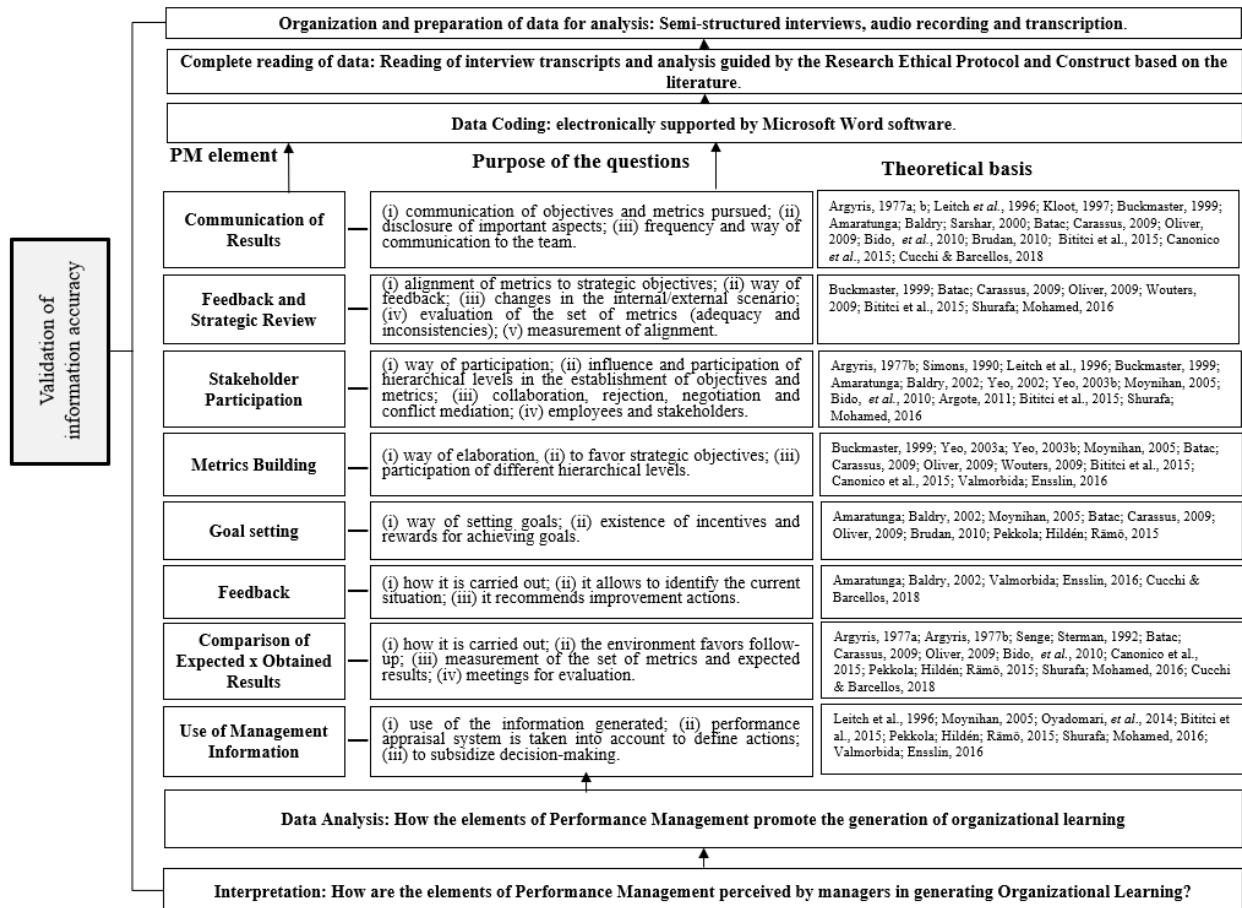


Figure 2. Research Construct and Interview Script

Source: Prepared by the authors.

Denzin and Lincoln (2006, p. 35) state that, to guarantee the scientific validity of a qualitative research, the “criteria of reliability, credibility, transferability and confirmability” must be observed. It is understood that the reliability is in the complete transcription of the interviews/speeches of the interviewees and exposure in the text of the speeches that provided the basis for understanding, with the identification of the interviewee. Confirmability is ensured at later reading and approval. Transferability is guaranteed to the extent that the study can be repeated, obtaining similar results, as long as the procedures for data collection are adopted (Yin, 2015). The adoption of the case study protocol and the database are essential to determine credibility (Yin, 2015). It was understood that the number of interviews was sufficient to validate the study, since the interviewees were the people most involved in the development and use of the PM system used by the organization.

#### 4 PRESENTATION AND DISCUSSION OF RESULTS

The results presented here were extracted from interviews with managers of the organization, directly involved with the design of the PM system. It is not intended to capture the global view of the phenomenon, but rather to understand how it is observed by a group within the organization.

The first question asked was about communicating the results. From the speeches, it can be seen that communication is showed to make explicit what is wanted and what is considered important:

The tool that the general manager has was a way of making it clear what the organization wanted about the objectives for the corporation and how to measure the achievement of those objectives (...) It shows that the organization has objectives, has goals (...) The visualization of the whole plan communicates more easily what is important, the objectives pursued. It's easier to measure.” **(Interviewee A)**

“When the organization says: 'this is important to me, you can do whatever you want in your unit, but you have to handle this, these five or six indicators here. [sic] These I will charge you. You can do other types of actions, develop other programs, but I want you to watch these'. It generated convergence!” **(Interviewee B)**

“The model made them see what they needed to do, guided them to identify the human aspects, equipment, but, mainly, in terms of activity, what was required to do.” **(Interviewee C)**

This communication also encourages and promotes behavioral changes:

“The organization wanted to encourage certain attitudes by employees. So, for example, it wanted a change in the employee's behavior, who previously did not communicate and did not commit to filling out the occurrence report. We wanted him to stop and start filling in the model that was established. So, we put an indicator. And then we found out that the MCDA model (Multicriteria Decision Aiding) favors you to change your behavior. You get out of a current situation (...) you can define what the future situation you want and make people go there.” **(Interviewee B)**

As for the way this communication is made, the interviewees point out that the information is made available by the system.

"They have access there daily in the system, they can access and have the information, in the same way that I showed you here." **(Interviewee A)**

They also pointed out that the initial way, to show that new procedures were adopted, was to inform the importance of the actions that needed to be developed:

“In the beginning, the model was focused on meeting the decision maker's needs. He was convinced it would be good. From then on, he started to do some convincing work. 'Let's see how the performance is doing, if it's good, if it's bad'. This was explained right away, this tool is not for picking on anyone. But we want you to start worrying (...) and direct your efforts to address this issue that we are considering important.” **(Interviewee B)**

It is possible to state that the PM system made it possible to communicate the important aspects and direct behaviors to reach the established goals. It was a way of learning: for the manager who made it possible to include in the PM system what he thought was important in terms of strategic objectives and goals, and in this way it became easy to check if they were

achieved; and for employees, as they see how daily actions impact the achievement of important objectives.

Feedback in PM is related to the periodic review of objectives and criteria (metrics) that are used to measure performance, adjusting or redesigning metrics. In this regard, the interviewees report that the organization had several previous strategic planning experiences, which ended up being ineffective because they did not involve internal reflection on the suitability and applicability of the metrics. It is also noted that they attribute to the processes of the methodology used part of the reason for success in learning:

“It was envisaged that it would be an interesting methodology for the organization to use to make its strategic planning. We had already done three experiences of (...) strategic planning. And the difficulty we encountered in these three experiences was that of being able to transpose strategic planning into practice. It is a complicated thing to define strategic guidelines. Making the strategic plan is the easiest thing to have, but it ends up not having practical applicability because there is no way to control it. So, you create plans, indicators, guidelines, unfold into actions, indicators, but you can't control them because you can't measure them. So that was the anguish we had at the time. And then, as head of the organization, taking note of the methodology, he saw that there was the link that we needed, the methodology could complement what we had tried in the past, but had not been able to do.” **(Interviewee B)**

They point out that the implemented PM system was able to operationalize the strategic planning:

“The indicators that we are measuring are part of the strategic plan. We have a document called a strategic plan and it consists of a mission, vision, strategic guidelines, and all other indicators are aligned. We have done a validation process for this every two years. So, for example, in some projects, some indicators that dealt with very specific projects and that we managed to reach 100% excellence, there was nothing else to improve, because the project was exhausted. Then we withdraw it. And others have emerged, for example, mobile. When we started (...) we never imagined that we might have to build the project.” **(Interviewee B)**

Based on the operationalization of strategic planning, the system became something present and useful for the organization, and this learning made it possible to verify which aspects were not adequate/aligned and when it was necessary to review the system:

“We understood that it would not be opportune to review the plan without establishing a strategic plan for the organization that is not (...) or was not aligned with the State's development plan. And this review of the strategic plan will work to align the strategic plan, with the processes that the organization executes and with the budget, allocating resources for what is important.” **(Interviewee A)**

Analyzing the speeches of the interviewees, the learning generated in the experience of the PM system made it possible to operationalize the strategic objectives, and the feedback allowed to visualize the misaligned aspects that would need improvement, which drove the review of the system and the objectives and goals contained in the strategic plan.

The participation of all, leaders and collaborators, made the learning provided by the PM system to be shared in order to become institutional. Having changed the general manager, there were changes in the indicators, but the system's operating logic was maintained.

Through speeches, it is possible for all hierarchical levels of the organization to participate.

“And all hierarchical levels can participate in this process. At this moment when revisions are made in the consultation via the area manager, we depend on the capacity of the local manager who receives this demand to socialize it in his unit, right? We end up having little control over that. If a guy gets there and doesn't transmit properly, it doesn't give people access to it.” **(Interviewee A)**

They state that initially, when the model was built, there was no broad participation. A group was trained to develop the PM system, establishing strategic objectives and operationalizing them through performance indicators and goals.

“In the beginning there was none. There was the will of the decision-maker who chose the qualified employees to be able to build, then he went to the strategic council. It was presented and then suggestions were collected. Those who have basically used this tool a lot are the employees at the tactical level, which is a management tool, the 'end' employee uses little. So, who will use it is the general manager. The operations manager uses it to do planning. And to get to the end we have internal documents, which are the operating orders, the service orders.” **(Interviewee B)**

“They did not participate in the initial construction. Then when the system started to work and operationalize the electronic system, the players started trying to influence it.” **(Interviewee C)**

They recognize that there are other ways to promote participation that could be adopted, but that have not been so far.

“So, it's only at the moment that we have the first version ready. In fact, they do not participate in the process of building the objectives, because we have great difficulty in terms of methodology to do this, right? We are talking about an organization of 10,000 people. Of course, there would certainly be other ways, we could do seminars, etc., but the way we thought we were giving the opportunity is when the first version is ready to make available to the units to give feedback on it.” **(Interviewee A)**

The involvement was also stimulated by the change in work routines necessary to feed the system. Based on the implementation, there was a work to convince the importance of the participation and feeding of data and use of the system.

“So, we tried to instill (...) We realized that doing this by imposition is complicated. So, we worked for convincing. There are units that are much more advanced. That has this as (...) reference, that accompany this here. Others less. Others much less. But we believe here that it was a business that entered culture, into routine. So, in those six years, there was learning. Mainly because we just did a job now to build the organization's value chain.” **(Interviewee A)**

They recognize that participation started to be more effective when they involved employees in the definition of actions necessary to reach the goals defined by the high echelon.

“So, in the past [the general manager] had a logic. Here he established the plans to be carried out at the end. From here he said: ‘You are going to do this, this and this [sic]. Gosh! How is it? this if it has no connection. What is my problem with reality?’. So, now, we establish the objective, we establish the goal. And the actions to be able to reach the

goal are established at the local level.” **(Interviewee A)**

It is still very present in the speeches of the interviewees that participation is made possible in the system reviews, and the interlocutors are the area managers. The suggestions presented are evaluated by the general manager and are often incorporated into the model/system.

“But here specifically when there are the reviews, throughout the process, suggestions are collected and for changes in the next review. And during the review there is that moment when we give people the opportunity to look at [sic].” **(Interviewee A)**

“In each review. Before we close (...) we do the version, validate with the strategic council. Before publishing and saying that this is it, we forward it to all commands. There, the organization has the task of gathering its employees, disseminating it among employees. If they have any contribution, any consideration, any question to ask, do it. And, in fact, during this process, we received feedbacks, issues that ended up being incorporated into the plan. So, we don't publish without first giving them the opportunity to make a contribution [sic]. And this process happens even with the plan already published. If they have feedback, there are considerations that end up not being incorporated at that moment, but that will be analyzed in the next review.” **(Interviewee A)**

An important factor presented is the commitment of the leaders and the engagement that he got from the team. As pointed out by interviewee C, “To my knowledge, there was no incentive to honor the model. The model was justified in two ways: its results and the commitment of its leaders”.

Another aspect presented was the renewal of the workforce and the changes in general managers that occurred during the period.

“As people were impacted, when people started to enter the organization with a new mind, they started receiving this information at the school bench, so that they who are receiving information there, will no longer be surprised (... ) It is already the standard and for this 'older' the standard is another. He will have to adapt, he will have to leave the comfort zone, stop doing what he did and does it well, many times, to adapt to the new context, the new 'paradigm' and that, for those who are more detached it generates an opportunity to make a great progress, but for those who are more afraid, this ends up generating discomfort. ” **(Interviewee B)**

“Having changed the general manager of the organization... that in a public agency the risk is very great of you having a whole ‘disruption’ about what was being done by being linked to the person of the previous manager, right? And we were happy to change the manager and maintain the logic. In fact, the second review is already [under] another command.” **(Interviewee A)**

It is observed the construction of metrics that enabled learning as they understood that, making it clear and integrated to the objectives pursued, it would be easier to involve people to collaborate with the evaluation system. So, the officials did.

The interviewees point out that they invested a lot of efforts to think about the indicators, reflect on how to measure the aspects that answered for the strategic objectives: “We know that when I establish the indicator, I direct the mission and effort.” **(Interviewee A)**

They also reflected on how and why to measure the objectives:

“Today, for example, the strategic plan works with the logic that the organization defines

what, how much and what is the objective, and makes it possible for the end to participate, but whoever wants to see the result is the decision maker. Then define the objectives and how much ... that is, the goal and indicators, the measurement method and the databases that feed each indicator, to make the rate, the unit's effective number, very transparent. There are indicators that I use that use the order number information. What is the absolute value I use? Because that rate of 39.5 refers to occurrences in the twelve-month period, right? How, the actions (...) is the community that will make that objective operational, it is a local construction.” **(Interviewee A)**

Still, they were concerned with informing which were the bases that fed the system to make the understanding clearer and give credibility and reliability to the process:

“In the composition of the plan, we took care not to generate discredit in relation to everything that had been done historically. So, we took great advantage in the construction, in structuring the problem and in defining the main issues of the plan, we took advantage of the previous plans. So, we already had a story, and what was decided at the time: “We are not going to throw that away”. We took advantage of what we already had and from there we started to build all the indicators, the structure tree.” **(Interviewee B)**

“It was taken very calmly. When you put indicators, people's first reaction is: ‘Oops! They're trying to control me, so I'm against it! ’ Controlling means that at some point you are liable to be punished. The general manager then called a meeting with all the area managers explaining that the intention was not to control anyone, that it was just to direct efforts so that everyone would think in the same direction. That those who were in difficulty, or who appeared with a difficulty there, we would give support. Why didn't I reach the reduction rate for a given occurrence? Is it lacking effective for me? Is structure missing? Is there any influence from an external factor? So, the first way to do this was through talking about convincing the use of the tool, mainly for high-level, right? He knew that that Business Intelligence (BI) and that information he could use to measure performance and along with that he could have the basic information about what was happening.” **(Interviewee B)**

In this way, they avoided mistrust regarding the results presented, showing the bases from which the data responsible for the information on the performance achieved were collected, and, above all, were accessible to them, to improve the results.

In relation to the goal setting, the same concern with the credibility of the system was found in relation to establishing achievable goals and also to challenge employees, as well as to show the system's operating logic, the expected results and the mechanisms of control adopted:

“Another thing, this idea of the location, I can plan my unit, right? With goals, things... as much as I can't get away from the indicator, here [I can plan] how much the goals would be, [how much] people can contribute, right?” **(Interviewee A)**

“Before, we heard: ‘Gosh, but what is this? Where did they get our goal from? This is impossible! What data did they use? It's wrong. It's wrong!’” **(Interviewee B)**

“You can always explain the goal. Because the person asks: “Where does this number come from? Where did you get that from?”. So, this question of knowing how to explain the performance benchmark that was established is fundamental. Can the person question, can he say he has other [numbers]? He can. But at least the one that was established, has a reason, right?.” **(Interviewee A)**

This goal setting was not only intended to demonstrate that it was doing well, but to ensure that employees did not settle and continue to seek continuous improvement:

“In the result indicators (...) I have a State goal, but I have regional goals. This was an innovation that we made in this review of the plan here. To make more sense, to charge more, to set reasonable goals. So, at the same time, the goal (...) has to require effort, but it cannot be something that is unattainable or (...) something so easy that the guy doesn't have to do anything that is right. And in previous plans, the goal was statewide. (...) So, more complicated regions when they established the State goal, no matter how much the guy did, the guy would never reach that goal there in time. (...) [Already in] regions of the State that are quiet, the guy “sailed” loose. Then we opted for these result indicators, to be established by region. So, there is a goal for the organization as a whole, but each region is charged for a goal according to its reality.” **(Interviewee A)**

“We were extremely strict in terms of calibration. The ‘indicator No. 1’, we decided (...) following an international trend (...) to increase this, to involve more aspects. And we put ourselves as neutral, [and it was] our best performance in the last five years. So, for us to be able to go out to the market level, we needed to tie with our best historical performance. And to go to the level of excellence, we use the index of the United Nations (UN), which is ten per 100 thousand inhabitants, to get there you will have to work hard. Then we made an adjustment in the calibration for the regional issue”. (Interviewee B)

It was noticed by the speeches of the interviewees that there was learning in relation to the goals, both in the adjustment of their establishment and in the credibility of information to feed the system and indicate the fulfillment of the goals. In the interviewees' perception, this aspect was what strengthened the collaboration of people to reach them.

As for feedback, the interviewees stated that the implanted PM made it possible to have and give feedback in real time, because with access to the system, it is possible to follow:

“The general manager has information about which units are (...) pushing performance down. Then he verifies that these two are in the green, one in the yellow, and this one is in the red, right in the red.” **(Interviewee A)**

“So, here, the mobile tool allows you to measure almost the entire information management management process? Collection, registration, processing, analysis and presentation of the results, which you compare with the metrics that have been established. At first, there was difficulty with innovation. When we start [to] diffuse, it reduces.” **(Interviewee B)**

From the speeches of both interviewees (A and B), it is pointed out that, at the beginning, feedback was coercive, focused more on control, then started to focus more on what was happening, understand the reason for that, aiming to improve, thus incorporating the learning:

“Feedback (...) at the beginning, there was more of this culture, of picking up the phone and calling charging. After that it was left a little aside. So, we had meetings where the performance of a unit was exposed there, I called the unit area manager up front to explain what was happening.” **(Interviewee A)**

“Then there was a control mechanism, it was more bureaucratic than the controlled thing and then we kind of left it aside (...) because we followed up it. So, from time to time, we come in, with a certain periodicity, look at what is happening and interfere with the staff.” **(Interviewee B)**

Interviewee C understands that the feedback process has worked and worked in the organization. However, remember that, in the revisions of the system, an external look on the whole model would be necessary:

“And this feedback process is indispensable for the evolution process, but it has to have feedback with grounded knowledge, (...) using the Delphi technique, that is, by a group of people who are experts for validation, and putting it into discussion, and from that discussion, good leadership would cause this group to converge in terms of the next stages of evolution of the model.” **(Interviewee C)**

The comparison of results in PM is related to the analysis as to the expected results in comparison with the results obtained, the real performance with the desired one. In this regard, it was explained that, as the indicators were established, they provide a comparison in real time:

“Mainly for the activity's result indicators, we work with rate, with the number of that event per 100 thousand inhabitants in the last twelve months. Each objective has the performance ranges and here in this general is the state goal. So, we realize what we are skating on and what we have achieved. We managed to improve it, we managed to establish interesting performance benchmarks, so here it is alive. And that's cool because each unit, for example, each one sees its performance.” **(Interviewee A)**

“They are on several levels, right? Both at the operational and the strategic level, each one looks at what concerns him and checks the situation, what he has to do to reach [his goal] or whether he is at the good level or not.” **(Interviewee B)**

In the system, signaling of reference levels was created: red for performance below the minimum acceptable goal; yellow for those considered competitive; and green for performances considered excellent and superior to the established goals:

“But for his region, this value is bad, (...) [that] was what allowed the goal to be regionalized. It allowed us to verify (...) this performance, here it would be at the level of excellence. But from there to the region, it does not reflect their reality” **(Interviewee A)**

“There is often a reprimand. we look there, the guy is getting worse, getting worse, getting worse, getting worse (...). [The situation] is not [institutionalized], it is more personal, especially when you realize that the unit is totally divergent. Then you identify these differences and the tool helps to draw attention and straighten things out” **(Interviewee A)**

“At the MCDA we build, it shows whether it has gone up or down. Oops! It got worse. What you are going to say has reference, right? What you will tell me, what is happening, is the information that feeds it and then the tool works a lot. Nice that the same information I have, that tells me it gives: on such day, time, circumstances, graph of the impact of that there. So, in fact, I have twenty occurrences, the speck there on that scale, the MCDA indicator... I'm going to put the BI, it's going to tell me what time the twenty were, it's going to demonstrate the twenty, to break them up in different aspects, that you have more information to understand. How do I avoid it?” **(Interviewee B)**

When asked about the use of information for management, all interviewees confirm that the PM system is only working because it subsidizes the decisions to be made and verifies the achievement of the objectives. From the speeches, it is clear that the use of information is incorporated into the organization's day-to-day:

“Today it serves much more as a reference for the unit itself about its performance (...) Even after six years we are still learning. There are many other units of ours that have

incorporated this. (...) [There is] a meeting, people comment, open the system and show it. I can see the status quo of what is most observed and what is most important to us, which is the result.” **(Interviewee A)**

Learning also occurs in the generation of information that supports the decision to use the information to justify the decisions made and to direct the improvement measures formulated, in case the goals are not met:

“The follow-up part of this, the collection of results, follow-up, control and collection, I think is still a big gap. Despite the facilities of the tool, I think it is not yet incorporated into the culture. (...). But they have access and often do. (...) Several times articles appear on the organization's website and the guy says: ‘we’ve improved’, and a screen of the strategic plan graph appears here. Sometimes you go to meetings, the guy starts saying that this thing has improved and shows that graph that he saw here and went there.” **(Interviewee A)**

"It shows the consequences and supports decision-making." **(Interviewee C)**

Although they recognize that the information generated by the system can still be further explored and bring more benefits to the organization and to improve work:

“Our expectation is that generations that have been working at the tactical level will not give up and that it will consolidate itself as a more robust decision-making tool. It will contribute to the tool being used more in the day to day decisions. But I confess that it is less used than it should be.” **(Interviewee A)**

When asked what they believe would be different in management if there were no reference system, they state that

“Certainly, if it weren't here, ‘the machine ’would continue to spin. I don't know if the results would be better or worse, but we would certainly continue to work only without reference, without knowing if we were reaching an objective.” **(Interviewee A)**

“Before, we had data, but it was not organized. Sometimes it wasn't, sometimes it wasn't registered, sometimes it would have to create a system to be able to record that information. That was made possible by the organization proposed by the MCDA-C and the operationalization of it via BI.” **(Interviewee B)**

There were incentives for people to start worrying about the results presented by the system, this reason directed efforts so that it was considered important and received collaboration:

“He started to charge from there, to demand, to control, and people at least [to] start [to] access the BI, to follow up on that. Then he took the initiative of every area manager, when he came to talk to him, he asked to open the BI in front of him. Then he would take the indicators that were most relevant to his area. ‘How are you doing?’ Observe if it went up, down, up or down. So, we started to effectively do strategic management, based on the methodology and the tool. If there weren't the tool, we wouldn't have been able to do it. We would have a lot more difficulty doing it.” **(Interviewee B)**

“We did two or three training sessions. We brought all the heads of operational planning from all the units and we did two days here. We explained the tools, we showed them the importance. (...) Hence it is no longer done intuitively. It has protection. It starts to be done with strategic direction.” **(Interviewee B)**

All interviewees point out that the system is used in management. If it were not so, there would be no reason for the organization to have the tool, and it certainly would have been more of an unsuccessful experience.

Figure 3 summarizes the findings of this research about how the events are perceived by managers during the performance management process and which, according to the basic literature, show the development of organizational learning.



Figure 3. Managers' perception on the development of OL

Source: Research data.

## 5 FINAL CONSIDERATIONS

This research aimed to investigate the presence of PM elements in the generation of OL, based on a case study in an organization that developed a system that has already gone through all the stages of building an PM system: design, implementation, use and feedback. Three people directly involved in planning and implementing the system were interviewed. The semi-structured interviews were guided by the basic literature that points out the presence of the elements.

Analyzing the speeches of the interviewees, it appears that the PM system, used by the organization, was designed based on a continuous cycle of reflection, since the previous strategic planning experiences did not prosper. It is identified by the reports that, with the operationalization of the system, the organization was able to realize the reality faced, detect and correct problems that existed and were not known. It is possible to think of necessary actions to develop improvements and solve these problems.

As the literature points out, learning emerges in individuals, and becomes organizational when it is developed by the experience and actions of its members. In the case under study, it is clear that the PM system was a way found to socialize knowledge through communication and dissemination of the pursued objectives, indicators and goals that guided the evaluation system.

It is clear that communication permeates the entire process of PM, because it explains what is desired with the construction of metrics and the goal setting. These, in turn, encourage the use of information for management and guarantee timely feedback, allowing the results obtained to be compared with those expected, defined by the goals set.

This feedback provides the participation of all stakeholders, interested in the results presented, making it possible for the organization to verify the achievement of the strategic objectives pursued and to periodically feedback the system. When it understands that it is convenient to revise its strategy, the organization will be able to review its beliefs, behaviors and actions, and be more prepared for environmental changes.

The results are limited to the presentation of interviewees' answers to the questions raised by the researchers about what the consulted literature on learning in PM shows. The researchers understand that the interviewees were aware of the scientific purpose of the questions and the implications for themselves and the organization of their speeches, which may have limited the answers given. It is suggested for future research, research in other organizations to compare experiences and expand the number of interviewees.

## **REFERENCES**

- Alvesson, M. (2003). Beyond neopositivists, romantics, and localists: A reflexive approach to interviews in organizational research. *Academy of management review*, 28(1), 13-33.
- Amaratunga, D., & Baldry, D. (2002). Moving from performance measurement to performance management. *Facilities*, 20(5/6), 217-223.
- Amaratunga, D., Baldry, D., & Sarshar, M. (2000). Assessment of facilities management performance – what next? *Facilities*, 18(1/2), 66-75.
- Argote, L. (2011). Organizational learning research: Past, present and future. *Management Learning*, 42(4), 439-446.
- Argyris, C. (1977a). Double Looping Learning in organizations. *Harvard Business Review*, (Sept./Oct.), 115-125.
- Argyris, C. (1977b). Organizational learning and management information systems. *Accounting, Organizations and Society*, 2(2), 113-123.
- Batac, J., & Carassus, D. (2009). Interactions between control and organizational learning in the case of a municipality: A comparative study with Kloot (1997). *Management Accounting Research*, 20(2), 102-116.
- Bido, D. S., Godoy, A. S., Araujo, B. F. V. B. de, & Louback, J. C. (2010). Articulação entre as aprendizagens individual, grupal e organizacional: um estudo no ambiente industrial. *RAM. Revista de Administração Mackenzie*, 11(2), 68-95.
- Bititci, U. S., Garengo, P., Ates, A., & Nudurupati, S. S. (2015). Value of maturity models in performance measurement. *International Journal of Production Research*, 53(10), 3062-3085.
- Brudan, A. (2010). Rediscovering performance management: Systems, learning and integration. *Measuring Business Excellence*, 14(1), 109-123.

- Buckmaster, N. (1999). Associations between outcome measurement, accountability and learning for non-profit organizations. *International Journal of Public Sector Management*, 12(2), 186-197.
- Canonico, P., De Nito, E., Esposito, V., Martinez, M., Mercurio, L., & Iacono, M. P. (2015). The boundaries of a performance management system between learning and control. *Measuring Business Excellence*, 19(3), 7-21.
- Coad, A. (1996). Smart work and hard work: explicating a learning orientation in strategic management accounting. *Management Accounting Research*, 7(4), 387-408.
- Cucchi, M. B., & Barcellos, P. F. P. (2018). O Papel da Liderança no Processo de Mudança e Aprendizagem Organizacional: Estudo Multicaso nas Empresas Duradouras do Setor Metalmeccânico de Marau, RS, Brasil. *Pensamento & Realidade*, 33(4), 97-122.
- Denzin, N. K., & Lincoln, Y. S. (2006). *O Planejamento da Pesquisa Qualitativa: Teorias e Abordagens* (2a ed.). Porto Alegre: Artmed.
- Kloot, L. (1997). Organizational learning and management control systems: responding to environmental change. *Management Accounting Research*, 8(1), 47-73.
- Leitch, C., Harrison, R., Burgoyne, J. G., & Blantern, C. (1996). Learning organizations: the measurement of company performance. *Journal of European Industrial Training*, 20(1), 31-44.
- Lukka, K., & Modell, S. (2010). Validation in interpretive management accounting research. *Accounting, Organizations and Society*, 35(2010), 462-477.
- Moynihan, D. P. (2005). Goal-based learning and the future of performance management. *Public Administration Review*, 65(2), 203-216.
- Oliver, J. (2009). Continuous improvement: Role of organizational learning mechanisms. *International Journal of Quality and Reliability Management*, 26(6), 546-563.
- Oyadomari, J. C. T, Pedrique, A. L., Bido, D. S., & Rezende, A. J. (2014). Uso do controle gerencial e decisões em organizações de saúde brasileiras: um estudo exploratório. *Brazilian Business Review*, 11(2), 1-34.
- Pekkola, S., Hildén, S., & Rämö, J. (2015). A maturity model for evaluating an organization's reflective practices. *Measuring Business Excellence*, 19(4), 17-29.
- Sampieri, R. H.; Collado, C. F. & Lucio, M. D. P. B. (2013). *Metodologia da Pesquisa* 5. ed. Porto Alegre: Penso Editora, 2013. 624 p.
- Senge, P. M., & Sterman, J. D. (1992). Systems thinking and organizational learning: Acting locally and thinking globally in the organization of the future. *European Journal of Operational Research*, 59(1), 137-150.
- Shurafa, R., & Mohamed, R. B. (2016). Management control system, organizational learning, and firm's performance: An empirical study from developing economy. *International Journal of Advanced and Applied Sciences*, 3(10), 79-88.

- Simons, R. (1990). The role of management control systems in creating competitive advantage: New perspectives. *Accounting, Organizations and Society*, 15(1), 127-143.
- Twining, P., Heller, R. S., Nussbaum, M., & Tsai, C. C. (2016). Some guidance on conducting and reporting qualitative studies. *Computers & Education*, 106, 1-9.
- Valmorbida, S. M. I., & Ensslin, L. (2016). Construção de Conhecimento sobre Avaliação de Desempenho para Gestão Organizacional: uma Investigação nas Pesquisas Científicas Internacionais. *Revista Contemporânea de Contabilidade*, 13(28), 123-148.
- Vergara, S. C. (2009). *Métodos de coleta de dados no campo*. São Paulo: Atlas.
- Wouters, M. (2009). A developmental approach to performance measures - Results from a longitudinal case study. *European Management Journal*, 27(1), 64-78.
- Yeo, R. (2002). From individual to team learning: practical perspectives on the learning organisation. *Team Performance Management: An International Journal*, 8(7/8), 157-170.
- Yeo, R. (2003a). Linking organisational learning to organisational performance and success: Singapore case studies. *Leadership & Organization Development Journal*, 24(2), 70-83.
- Yeo, R. (2003b). The tangibles and intangibles of organisational performance. *Team Performance Management: An International Journal*, 9, 199-204.
- Yin, R. K. (2015). *Estudo de Caso: Planejamento e Métodos* (5a ed.) Porto Alegre: Bookman.