



Quality and Productivity

A substantive theory on the implementation process of operational performance improvement methods

*Uma teoria substantiva sobre o processo de implementação de sistemas de melhoria de desempenho operacional*

*Una teoría sustantiva sobre el proceso de implementación de sistemas de mejora del desempeño operativo*

Darlan José Roman<sup>a,\*</sup>, Marilei Osinski<sup>b</sup>, Rolf Hermann Erdmann<sup>b</sup>

<sup>a</sup> Universidade do Oeste de Santa Catarina, Chapecó, SC, Brazil

<sup>b</sup> Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil

Received 17 September 2015; accepted 23 August 2016

Available online 30 December 2016

Scientific Editor: Wesley Mendes-Da-Silva

**Abstract**

This study aimed to present theoretical categories on the phenomenon of the implementation of performance improvement methods in organizations. The method used was Grounded Theory, following the procedures presented by Strauss and Corbin (2008). In this way, the study was conducted based on the principles of theoretical sampling, and the data collection and analysis were conducted in alternate sequences, and it was composed by 05 (five) sample groups. The theoretical sample was composed of 26 (twenty-six) interviews conducted in 12 (twelve) companies. The participants were managers who have had experience with implementation of assessment and performance improvement methods. Thus, the substantive theory “A phase of change and learning” was built up. It consisted of 09 (nine) categories besides the core category. According to the results, the phenomenon of implementation of performance improvement methods is understood as a phase of change and learning that involves behavioral and structural aspects of the organization. It is concluded that these aspects should be considered from a systemic perspective, in order to integrate structure, technologies, behaviors and processes that are part of the phenomenon of implementation.

© 2016 Departamento de Administração, Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo – FEA/USP. Published by Elsevier Editora Ltda. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

*Keywords:* Implementation; Performance improvement; *Grounded Theory*

**Resumo**

Neste estudo, teve-se como objetivo apresentar categorias teóricas sobre o fenômeno da implementação de sistemas de melhoria de desempenho em organizações. O método utilizado foi a *Grounded Theory*, seguindo os procedimentos apresentados por Strauss and Corbin (2008). Desta forma, a pesquisa foi conduzida baseada nos princípios da amostragem teórica, sendo que a coleta e análise dos dados foram realizadas em sequências alternadas, e compreenderam 05 (cinco) grupos amostrais. A amostra teórica foi composta por 26 (vinte e seis) entrevistas, realizadas em 12 (doze) empresas. Os participantes foram gestores que já tiveram experiência com implementações de sistemas de avaliação e melhoria de desempenho. Desta forma, construiu-se a teoria substantiva “Uma fase de mudança e aprendizado”. Esta se constitui de 09 (nove) categorias, além da categoria central. De acordo com os resultados entende-se o fenômeno da implementação de sistemas de melhorias de desempenho como

\* Corresponding author at: Rua Nereu Ramos, 3777D, CEP 89813-000 Chapecó, SC, Brazil.

E-mail: [darlan.roman@unoesc.edu.br](mailto:darlan.roman@unoesc.edu.br) (D.J. Roman).

Peer Review under the responsibility of Departamento de Administração, Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo – FEA/USP.

<http://dx.doi.org/10.1016/j.rausp.2016.12.005>

0080-2107/© 2016 Departamento de Administração, Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo – FEA/USP. Published by Elsevier Editora Ltda. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

uma fase de mudança e aprendizado que envolve aspectos comportamentais e estruturais da organização. Conclui-se que estes aspectos devem ser considerados a partir de uma visão sistêmica, a fim de integrar estrutura, tecnologias, comportamentos e processos que fazem parte do fenômeno da implementação.

© 2016 Departamento de Administração, Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo – FEA/USP. Publicado por Elsevier Editora Ltda. Este é um artigo Open Access sob uma licença CC BY (<http://creativecommons.org/licenses/by/4.0/>).

*Palavras-chave:* Implementação; Melhoria de desempenho; *Grounded Theory*

## Resumen

En este estudio el objetivo es presentar categorías teóricas sobre el fenómeno de la aplicación de sistemas de mejora de desempeño en las organizaciones. Se utiliza el método de *Grounded Theory*, siguiendo los procedimientos presentados por Strauss and Corbin (2008); así, el estudio tiene como base los principios del muestreo teórico. La recopilación y análisis de los datos se realizaron en secuencias alternas y comprendieron 05 (cinco) grupos de muestras. La muestra teórica consistió de 26 (veintiséis) entrevistas realizadas en 12 (doce) empresas. Los participantes fueron directivos que tenían experiencia con implementación de sistemas de evaluación y mejora de rendimiento. Así, fue construida la teoría sustantiva “Una fase de cambio y aprendizaje”, que consta de 09 (nueve) categorías, además de la categoría central. De acuerdo con los resultados, se entiende el fenómeno de la implementación de sistemas de mejora de desempeño como una etapa de cambio y aprendizaje que incluye aspectos conductuales y estructurales de la organización. Se concluye que estos aspectos deben ser considerados desde una visión sistémica, con el fin de integrar estructura, tecnologías, comportamientos y procesos que forman parte del fenómeno de la implementación.

© 2016 Departamento de Administração, Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo – FEA/USP. Publicado por Elsevier Editora Ltda. Este es un artículo Open Access bajo la licencia CC BY (<http://creativecommons.org/licenses/by/4.0/>).

*Palabras clave:* Implementación; Mejora de desempeño; *Grounded Theory*

## Introduction

The organizations started to feel the need to resort to models and tools in an attempt to meet the real necessities of the context in which they operate, seeking, thus, to guarantee their continuity and assure competitive advantages. However, it is increasingly clear that a significant part of the change programs in the organizations has difficulty in operationalization. The results offered by the models do not always occur, and the efforts made (time, structure and money) end up being wasted.

Despite the great amount of publications about performance assessment, there is still a lack of approaches regarding the problems and difficulties associated to the implementation of change, and there is evidence of high levels of failure on the applications of the performance improvement methods (Bourne, Neely, Mills, & Platts, 2003; Hashmi, Khan, & Haq, 2015; Neely & Bourne, 2000; Scherer & Ribeiro, 2013; Trad & Maximiano, 2009; Waal & Counet, 2009; Walter & Tubino, 2013).

Therefore, in this research it is sought to discuss the following question: what is the meaning of the implementation of organizational performance improvement methods, experienced by business managers? Based on this question, it was sought to clarify how the organizations deal with the difficulties and the ease during the phase of implementation of operational performance improvement, which are the problems faced by the organizations during the implementation phase and how the initiatives may become more efficient and effective.

In light of the foregoing, the objective of this study is to present theoretical categories about the phenomenon of implementation of operational performance improvement in organizations, based on the reality experienced by business managers. The model building took place from the investigation of real cases that had experience in the application of operational performance improvement methods.

In order to achieve the objectives, the methodology used in this work was based on the Grounded Theory principles. Glaser and Strauss (1967) explain that in the Grounded Theory, the generation of assumptions substantiated in data is a way of getting to an appropriate theory for its alleged use. The concern is related to the construction of knowledge from specific realities.

The existing studies focus on the description of categories and instead of on their planning or theorization. They differ, therefore, from the proposal of this study. According to Strauss and Corbin (2008), there is a difference between description, conceptual planning and theorization. In accordance to a research, it was found that the studies that focus on the theme of implementation are descriptive. From the research done in the databases Scielo, Spell and Portal de Periódicos Capes [Capes Journals Portal], works dealing with this theme with the intention of conceptual planning or theory generation were not found. Another aspect differing this study from the others is related to the proposal of not studying a particular model, but proposing a more comprehensive and abstract research. Thus, the use of the grounded theory provides this study certain level of unprecedented nature, considering the theme approached.

It is common for the performance assessment and measurement models (TQM, 5S, Six Sigma, and others) to be described in literature as performance improvement methods or continuous improvement methods (Attadia & Martins, 2003; Frederico & Martins, 2012; Goessler, 2009; Gonzalez & Martins, 2007; Lima, Carvalho, & Herkenhoff, 2010; Silva & Araújo, 2006). In this sense, along this study the use of the expression performance method will be common.

After this introduction, the part referring to the literature is presented, and its focus is on the implementation process of organizational performance improvement methods. Subsequently, the methodological procedures are described. After, there is the presentation of the results, and the theoretical model that

emerged from the data and the closeness of the results with the literature are highlighted. At the end, the section is dedicated to the final considerations.

### The implementation of performance improvement methods

According to [Beber, Ribeiro, and Neto \(2006\)](#), “. . . it can be noticed that the enterprises still live with a substantial failure rate. It is up to the academy, as generator of knowledge, to dedicate to this challenge imposed by the enterprises, understand it and propose solutions”<sup>1</sup> (pp. 2–3). Just as important as establishing evaluations and improvement plans is to turn them into objectives and follow their implementation. During the implementation, it is important to pay attention to possible diversions, understand their causes and interactions and prioritize actions able to keep the proposed objective in mind. “In short, the success of the implementation of a strategic objective is associated to the manager’s ability to manage its implementation broadly” ([Schmidt, Santos, & Martins, 2006](#), p. 13).

Discussing specifically the implementation of the lean production, [Walter and Tubino \(2013\)](#) conclude that “undoubtedly, the lack of a clear understanding about the implementation performance may contribute significantly to the failure of the lean practices” (p. 34). Accordingly, [Hashmi et al. \(2015\)](#) provide results on the relation between the implementation of the lean manufacturing and the operational performance improvement. The authors evince that the lean implementation may become a complex and lengthy process, and the performance will be better as the actions are implemented. Attention is drawn to the importance of the existence of a planning and a schedule of actions to be integrated to the routine of the organizations.

In the same line, but emphasizing the model [Hwang et al. \(2015\)](#), Six Sigma ([Rosa & Cauchick Miguel, 2012](#)) understand that “. . . studies about the key factors to Six Sigma’s success could help to answer these questions (on the high abandonment rate), but they are relatively new or limited in number and focus of analysis” (p. 649).

[Wali and Boujelbene \(2011\)](#), in turn, explain that there is a relation between the organizational culture and the effectiveness of the implementation of the TQM (Total Quality Management) system. Organizations with a culture aligned to the change tend to get successful implementation that impact directly on the operational performance improvement, at first, and on the financial performance in the medium-term. [Madapusi and D’Souza \(2012\)](#) analyzed that the successful implementation of an ERP (Enterprise Resource Planning) system may improve the operational performance. The authors verified that there are not big differences in implementing isolated modules or the whole system.

[Hwang, Yang, and Hong \(2015\)](#) support the existence of a relation between implementation of an ERP system and improvement in operational performance. However, the authors warn that this relation is conditioned to the way the ERP

is implemented. On this subject, factor like the size of the enterprise, the complexity of the products and the existence of implemented systems (5S, Lean, Six Sigma) can affect the intensity of the performance improvement.

According to [Valentim, Politano, Pereira, and Filho \(2014\)](#), in many cases, the ERP system update is necessary and, in these cases, the difficulties are similar to the ones faced during the implementation itself. Among the aspects that influence in the update (and in the implementation) some of them out: change in the processes; top management support and commitment; involvement of people; consulting; and planning. [Sena and Guarnieri \(2015\)](#), investigating the ERP implementation process in the public sector, highlight that the group management, the knowledge about information technology and the resistance to changes are factors that considerably influence in the process.

[Gomes and Neto’s \(2015\)](#) study focus was the implementation of collaborative methods in the management of the supply chain. The following factors are highlighted as limiting factors for implementation: top management support; communication problems; ill-prepared or inexistent implementation teams; little knowledge about the method; lack of alignment with the business strategy; inexistent collaboration culture.

In [Albertin’s \(1996\)](#) study, it can be highlighted that the use of information systems can be a differential in terms of competitiveness increase. However, the implementation of these systems is not a simple process. The author highlights several aspects that must be considered before and during the implementation: context of the enterprise, culture, top management support, planning and adherence to the business strategy. The team management and the organizational culture are also highlighted by [Dolci, Lunardi, and Salles \(2015\)](#) in the process of implementing green IT systems.

[Deus, Seles, and Vieira \(2014\)](#) work focus on the existing barriers to the implementation of the system ISO 26000, which deals with the aspects related to the social responsibility in the organizations. Some aspects hamper the implementation of ISO 26000, and they are listed here: lack of knowledge or conscious about CSR, short-term culture of the business community, lack of knowledge about the system ISO 26000, and internal communication problem and with the stakeholders.

According to [Scherer and Ribeiro \(2013\)](#), the risk management is essential during the implementation of improvement programs, due to the structural and organizational changes that tend to happen. In [Rocha-Pinto and Del Carpio’s \(2011\)](#) words: “. . . the adequacy of the tool to the organizational context, respecting both the way how enterprises work and the implementation pace to each organization, without compromising the final objective, represents a lesson that can guarantee the implementation success” (p. 323).

There are organizational aspects that are characterized as promoters or inhibitors in an implementation process of improvement methods. Thus, it is essential to understand what the critical aspects are and create an environment with advantageous conditions to the change process ([Rocha-Pinto and Del Carpio, 2011](#)). In [Table 1](#), aspects that can be understood as problems faced by the organizations during the implementation of improvement methods are presented. [Table 1](#) was built from

<sup>1</sup> All translations from Portuguese are ours.

Table 1  
Important aspects related to implementation.

Critical aspects	Related problems	References
Top management commitment	Time constraints and daily pressure in the workplace result in prioritization of short-term problems solvency, which delay or hinder the development of the program.	Valentim et al. (2014), Scherer and Ribeiro (2013), Waal and Counet (2009), Beber et al. (2006), Prieto et al. (2006), Bourne et al. (2002), Al-Mashari and Zairi (1999), Albertin (1996)
Resistance and lack of people's involvement	Lack of motivation, enforcement of things and poor understanding about the model increase the resistance and hamper the process of people's involvement.	Valentim et al. (2014), Sena and Guarnieri (2015), Scherer and Ribeiro (2013), Waal and Counet (2009), Beber et al. (2006), Al-Mashari and Zairi (1999)
Implementation requires more time and effort than it was expected	It ensures that the members of the organization fell discouraged, due to the lack of short-term positive results, resulting in lack of commitment and global abandonment.	Waal and Counet (2009), Beber et al. (2006), Bourne et al. (2002)
External consulting	Inexperienced consultants and with poor knowledge about the company's activity sector will have difficulties in achieving positive results.	Valentim et al. (2014), Rocha-Pinto and Del Carpio (2011), Beber et al. (2006), Al-Mashari and Zairi (1999)
Knowledge about Project management	The implementation process tends to be softer when the organization shows matrix type structure and is familiar with the principles of the project management.	Scherer and Ribeiro (2013), Rosa and Cauchick Miguel (2012), Trad and Maximiano (2009)
Improper use of the model	Partial applications or exaggerated adaptations of the model are incompatible with the implementation, according to the principles described in the literature.	Beber et al. (2006), Prieto et al. (2006), Al-Mashari and Zairi (1999).
Centralization	The difficulty of power decentralization and of decision-making make the process more bureaucratic and slow.	Beber et al. (2006), Prieto et al. (2006)
Lack of integration with other systems	The new program should not be seen as something isolated from the day-to-day operations. The action planning should foresee the integration of the new model with the current methods and the developing ones.	Beber et al. (2006), Bourne et al. (2002), Al-Mashari and Zairi (1999)
Lack of systemic view	The implementation must consider the systemic aspects that rule the organization's functioning. Otherwise, there could be transfer of bottlenecks and/or conflict of interests.	Scherer and Ribeiro (2013), Beber et al. (2006)
Scarcity of resources and capabilities available to implementation	Organizations that wish to begin the implementation cannot free up enough resources (financial) and capabilities (people) for a successful implementation.	Scherer and Ribeiro (2013), Waal and Counet (2009)
Organization is at an unstable stage	The organization is in an unstable environment, it is busy with greater projects (for example, acquisitions), faces financial problems or undergoes issues that lead to a high stress level to the management.	Beber et al. (2006), Albertin (1996)
O programa não tem um objetivo claro	Falta de entendimento sobre o fato de que o programa é mais que um sistema de medidas e controle, resultará em comportamento cético e hostil.	Waal and Counet (2009), Beber et al. (2006)
The program does not have a clear objective	Lack of understanding about the fact that the program is more than a system of measures and control will result in skeptical and hostile behavior.	Waal and Counet (2009), Beber et al. (2006)
The organization does not have a clear and understandable strategy	If the organization's mission and objectives are not clear to its members, the program's structuring aspects will probably not be relevant to the organization.	Gomes and Neto (2015), Waal and Counet (2009), Beber et al. (2006), Albertin (1996)
Difficulty in disseminating information to the organizational levels	As a result, the lower levels of the organization may operate in misalignment with the corporative objectives. It may generate contradictions and use of indicators different from the established in PAS.	Waal and Counet (2009), Beber et al. (2006), Prieto et al. (2006), Bourne et al. (2002)
There is lack of knowledge and ability about the model	The lack of knowledge and ability (for example, insufficient training) in relation to the characteristics of PAS may result in partial or mistaken use of this system.	Gomes and Neto (2015), Hashmi et al. (2015), Scherer and Ribeiro (2013), Waal and Counet (2009), Trad and Maximiano (2009), Prieto et al. (2006), Al-Mashari and Zairi (1999)
Difficulties in defining relevant indicators	If the organization does not overcome this difficulty, the members may simply give up the implementation, due to the great effort necessary and the lack of trust about the quality of the established indicators.	Spessatto and Beuren (2013), Waal and Counet (2009), Beber et al. (2006), Prieto et al. (2006), Bourne et al. (2002), Al-Mashari and Zairi (1999)
Lack of performance management culture	The organization's lack of culture in achieving results and continually improving may affect the use of PAS in the sense of enhancing the performance.	Dolci et al. (2015), Scherer and Ribeiro (2013), Rosa and Cauchick Miguel (2012), Waal and Counet (2009), Trad and Maximiano (2009), Bourne et al. (2002), Al-Mashari and Zairi (1999), Albertin (1996)
Responsible member to implement and carry out the program	The lack of a member assigned and dedicated to supervise PAS could result in the abandonment of issues related to the update and resolution of the problem in the system.	Waal and Counet (2009), Prieto et al. (2006), Al-Mashari and Zairi (1999)

Table 1 (Continued)

Critical aspects	Related problems	References
Leadership	The leaders' behavior must be positive and stimulating in relation to the program. It is the leaders' role to provide favorable work conditions and transmit the necessary knowledge.	Scherer and Ribeiro (2013), Rocha-Pinto and Del Carpio (2011), Trad and Maximiano (2009), Bourne et al. (2002), Al-Mashari and Zairi (1999)
Planning and implementation plans	The lack of planning and establishment of consistent action plans contributes to the loss of focus. Issues related to necessary resources to the program must be clear and accessible.	Hashmi et al. (2015), Valentim et al. (2014), Al-Mashari and Zairi (1999), Albertin (1996)
The results of the program do not benefit the organization	If after the implementation there is not improvement in the results related to the performance, there will be strong orientations to abandon the program.	Rocha-Pinto and Del Carpio (2011), Waal and Counet (2009)
There is not enough focus in internal administration and control	If the program is used mainly to transmit external requirements instead of internal control, the members may consider the information less relevant.	Waal and Counet (2009)
Maintenance and update of PAS after the implementation	If the model is not always updated with the environment changes, it will lose the capacity of providing correct information about which improvement actions must be undertaken.	Waal and Counet (2009)

Source: Compiled by the authors.

the research for articles in the databases Scielo, Spell and Portal de Periódicos Capes [Capes Journals Portal], using the following keywords: implementation, performance improvement, and performance assessment, in English and in Portuguese.

Contributing to this discussion, Bourne, Neely, Platts, and Mills (2002) highlight that the main aspects that may influence to the determination of the implementation success are related to the context issues (required time and effort and resistance to change), process issues (strategic misalignment and undefined objectives) and content issues (difficulties in dealing with qualitative aspects and poorly established metrics). Moreover, it is possible to identify, in literature, influent aspects that relate to the organization's proposal, structure and culture.

The big challenge of the current conditions related to performance management is how to extract as much as possible from the data obtained by the application of the measuring and assessment methods. It necessarily involves the fortification of the models development process and, mainly, the understanding and overcoming of recurrent difficulties of the implementation process. About this last aspect, besides what has already been exposed, it will be important to consider political, infrastructural and focus issues (Neely & Bourne, 2000).

## Methodology

This section is divided into two subsections. The first one presents historical and conceptual aspects on the grounded theory. On the second moment, the characterization of the research is presented, in which the process of data collection and analysis is highlighted.

### *Grounded theory*

The grounded theory, also known in Brazil as data-based theory (teoria fundamentada em dados [TFD]), was developed by Glaser and Strauss (1967) as a method to develop theory from the data systematically obtained from social research (Büscher, 2007). Although these two authors (Glaser & Strauss, 1967)

presented differences on the way to conduct a research, the contribution of both was equally important. Strauss graduated from University of Chicago, which has a strong tradition in qualitative research. Glaser, in turn, graduated from Columbia University, and his research attitude was influenced by quantitative methods and an empirical perspective (Strauss & Corbin, 2008).

On the book *The Discovery of Grounded Theory*, Glaser and Strauss (1967) sought to evince how the discovery of the theory coming from the data – systematically obtained and analyzed in social research – can be promoted. The main point discussed by the authors is that the generation of grounded theory is a way to get to an appropriate theory to its alleged use.

The founders of this method took different ways after the publication of the seminal book in 1967. With Glaser and Strauss' separation, two main reference lines to use the method were defined. According to Büscher (2007), several authors have highlighted that, actually, the two ways undertaken to conduct the studies on grounded theory are very different. Thus, considering the differences between the approaches established after the disruption of the partnership between Glaser and Strauss, it is important that the researchers clearly decide which way they will follow in their studies.

Glaser's line adopts a more positivist attitude, suggesting the observer's neutrality and that the data, eventually, will discover the real conditions of certain context. In a second understanding line, Strauss and Corbin (2008) suggest that grounded theory should be approached with a more subjectivist and interpretative view, in which the researchers' work and interpretation are essential to the data and theory construction. This more subjectivist and interpretative stance is also verified in Charmaz (2009).

On the theory that emerges from the data, they reveal the individuals' behavior in the light of specific situations. The consideration of the literature or experiences of similar phenomena is recommended during the research process, however, as Strauss and Corbin (2008) explain: "... it does not mean the literature or the experiences will be used as data themselves" (p. 54).

According to Glaser and Strauss (1967), there are formal and substantive theories. The first ones are known as big theories; they are less specific and can be applied to a wider context. The substantive ones, in turn, are related to a specific problem, a substantive context, and try to explain certain phenomena from this context. The substantive theories can be replicated by other studies, and, in that way, they can start presenting formal theory characteristics.

The investigation through the grounded theory goes beyond the description horizon when working in the level of the conceptual planning, with the creation of categories, properties and dimensions and their relations. Strauss and Corbin (2008) affirm that “. . . theory denotes a set of well-developed categories which are systematically interrelated through statements of relationship to form a theoretical framework that explains some relevant phenomena” (p. 35).

According to Strauss and Corbin (2008), although the qualitative research is normally linked to the induction from specific cases to general ones, the deduction process also exists as data are interpreted and conceptualized. Therefore, deduction takes place based on data, but also on previous experiences and knowledge and on the discussions that occur during the research.

#### Characterization of the research

This study is characterized as qualitative, exploratory and descriptive, and grounded theory was used as method. The cases were selected through theoretical sampling. In the process of data collection, non-structured and semi-structured interviews were held, in addition to observation and documental research, and the interview was the main tool used. The data analysis was done using techniques such as microanalysis, open, axial and selective coding, in which the software NVivo, version 9.0 was used as auxiliary tool. The analytical scheme, known as “paradigm” was also used, composed by conditions, actions/interactions and consequences. In this study, grounded theory was built based on the procedures suggested by Strauss and Corbin (2008). The literature review section was written starting from the articles researched on the databases Scielo, Spell and Portal de Periódicos Capes, using the keywords implementation, performance improvement and performance evaluation, in English and in Portuguese.

The theoretical sampling was composed of five sample groups and 12 different cases, as shown in Table 2. The time elapsing during data collection and analysis was 14 months.

In this study, the process of data collection started with the selection of companies that were part of the first sample group. The selection criteria were based on the question and objective of the research. Basically, three criteria were met: (1) to have experienced or to be experiencing implementation of performance improvement methods; (2) to be at the market for at least 18 years; and (3) to be located in Santa Catarina State. Regarding the first criterion, the researcher faced three different scenarios: companies that failed in the implementation, companies that succeeded, and companies experiencing the implementation process.

Table 2  
Theoretical sampling.

Sample group	Company	Interviewee	Interview	
First	A	Production Manager	A1	
		Administrative Manager	B1	
	B	Engineering Manager	B2	
		Production Manager	C1	
	C	Process Engineer	C2	
		Process Analyst	C3	
Operating Manager		D1		
Second	D	Operating Coordinator	D2	
		Project Manager L	D3	
		Project Manager I	D4	
		Project Manager A	D5	
		Financial Planning Manager	E1	
	E	Manager		
		Consultant	F1	
	Third	G	Production Manager	G1
			Operating Manager	H1
I		Production Manager	I1	
	PCP (Planning and control of production) Coordinator	I2		
Forth	J	Executive Director	J1	
		Executive Director	J1'	
	L	General Manager	L1	
		Human Resources Manager	L2	
	M	Industrial Director	M1	
Fifth	A	Production Manager	M2	
		Production Director	A1'	
	C	Process Engineer	C2'	
Operating Coordinator		C3		

Source: Prepared by the authors.

In the first sample group or open sampling constituted in the first stage of the research, 6 (six) individual interviews were conducted with professionals from 3 (three) companies situated in Western Santa Catarina. At this stage, in-depth and non-structured interviews were conducted, under the guidance of the objective and question of the research. At the second stage of the theoretical sampling, 7 (seven) individual interviews were conducted with professionals from two companies located in Grande Florianópolis. These were in-depth and semi-structured interviews. The interview script was elaborated from the results found in the first sample group. The choice of the cases was influenced by the results of the data analysis of the first sample group, which indicated the need to explore the environment of a large company, as well as interview someone connected to the financial area and an external consultant.

The third group of cases that continued the theoretical sampling was composed by 4 (four) companies located in Grande Florianópolis and Southern Santa Catarina. The cases were chosen from the interviewees' indication in the previous stage and according to the results of the data analysis. The results from the previous sampling stage guided the accomplishment of the interviews, which were in-depth and semi-structured as well. A script with the emerging categories was used. The cases which formed the forth group are located in Grande Florianópolis and Vale do Itajaí. The researcher opted to return to company “J” due to the relevance of the case, and to the interviewee's interest

in accompanying the survey. It was also chosen to interview managers of companies experienced in the implementation of the methods BSC and Lean production, which are frequently approached in literature. The interview script was elaborated from the data analysis of the previous stage and counted on 12 (twelve) emerging categories. The model theoretical saturation started to get more evident because of the interviews conducted in the fourth group of cases, according to M2's comment:

I don't have the whole truth, but I have some experience and I see that what was presented is very well-aligned to what we have already witnessed in the process, and many things that we have witnessed that didn't work was because really one or more aspects pointed here ended up unobserved or not taken seriously, and it ends up returning to how it was before.

It is important to highlight that the researcher is who notices that the theory under construction is reaching the theoretical saturation. The evidences arising from the interviews, according to the previous comment, only reinforce this researcher's perception in relation to the saturation. Other comments in this regard were made. Thus, it was opted to conclude the theoretical sampling with a fifth sample group, returning to the first cases, in order to make a selective sampling and one of the stages of the model validation as well. The intention was to interview all the professionals who had previously participated, however, this possibility was discarded for several reasons. Therefore, the fifth and last stage of the theoretical sampling was held in two companies from Western Santa Catarina.

All the previous interviews were recorded and transcribed; however, the interviews corresponding to the fifth stage of the theoretical sampling were recorded, but not transcribed. The option not to transcribe the interviews was made because in this stage of the research the intention was to saturate the already developed categories and assist in the conceptualization of the relationships among the categories. Thus, the interviews were carefully listened to, observations were written, and relationship memos were elaborated. In the following section, the path covered to data collection and analysis.

The process of data analysis took place from the microanalysis, open, axial and selective coding. The microanalysis consists of a process of detailed data analysis, often times made line by line or word by word. The open coding is the analytical process whereby the concepts are identified and their properties and dimensions are detected in the data. The axial coding, in turn, consists of the process of relating categories and subcategories. Finally, the selective coding is the process of integrating and refining the theory (Strauss and Corbin, 2008).

The transcribed interviews were imported to the software of qualitative data analysis NVivo, version 9.0. This software was used during all the stages of the research and it considerably facilitated the work with the data, mainly in the filling of the transcribed interviews, creation of categories and memos. According to Lage (2011), NVivo is one of the most used softwares in Brazilian academic environment, and it was adopted by the research center of a large part of the universities, notably Unicamp, USP, and UFRGS and, especially in social sciences and health areas.

After data collection and analysis and the theoretical saturation, the built theoretical framework was validated. The validation of the built theoretical framework from the procedures provided by Grounded Theory must not be understood as quantitative test. The main concern in this stage is to verify if the elements constituting the theory effectively reflect what was said during the interviews, in other words, if the abstractions performed by the researcher are in accordance to the raw data.

According to Strauss and Corbin (2008), there are several ways to validate the theoretical scheme. One of the ways is to return to the raw data in order to compare them to the aspects composing the scheme. Another way of validation cited by Strauss and Corbin (2008) is to meet the participants of the research and present the framework, its categories, properties, dimensions and relationships. The informants must consider themselves as part of the scheme. The theoretical framework built in this study was validated in the two ways previously cited. After the conclusion of the fourth stage of the theoretical sample, the rereading of all the interviews began in order to make a high-level comparative analysis. At this stage, some adjustments of the model took place, especially related to the properties and dimensions. The other stage of the framework validation was done resuming the cases that formed the first sample group.

Besides the theoretical validation, the methodological validation was performed. Therefore, the methodological procedures were assessed and validated by Doctor Professor Andreas Büscher in Hochschule Osnabrück – University of Applied Sciences located in the city of Osnabrück in Germany, while the researcher was at that University. The methodological validation took place starting from five formal meetings with the specialist professor, with an average duration of one and a half hour each meeting. Additionally, several comparative readings of thesis, dissertations and articles that used the grounded theory in proposals similar to the one described in this study were made. In the following section the theoretical model that emerged from the data is presented, which is entitled “A phase of Change and Learning”.

## Presentation and discussion of the results

According to the results achieved, the implementation of performance improvement methods can be understood from a perspective of change and learning. Structural and behavioral changes are necessary and, likewise, the organization undergoes a phase of development and learning, acquiring competences to deal with the dynamic and evolutionary environment that characterizes the market. The model emerged from the grouping by similarity of the codes generated in the software NVivo, originating the categories. The codes arose from the codification of the transcribed interviews.

Therefore, the reality of the company is a condition responsible for creating the situations that lead to the implementation process. The reasons to start the program must be internal and/or external to the organization. The way the company is structured at the moment, connected to the context, culture and processes, will create a set of situations and problems that interfere in the process proceedings.

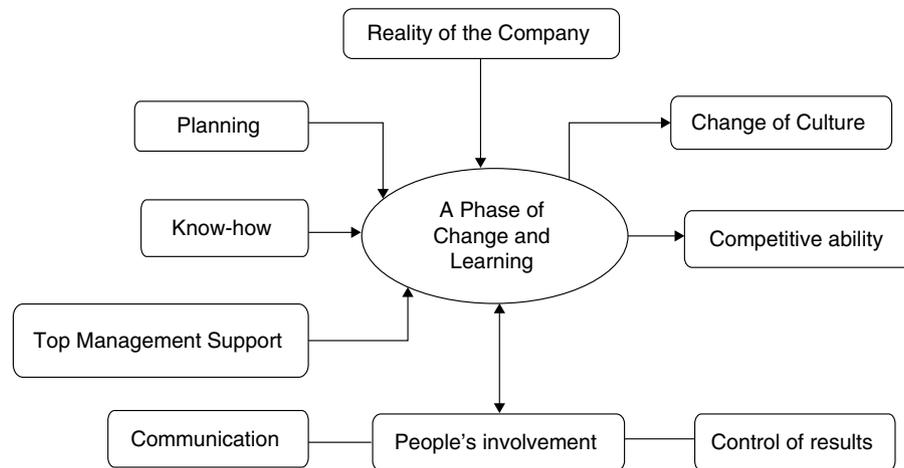


Fig. 1. Substantive theory: “A phase of change and learning”.

Source: Prepared by the authors.

In the same direction, planning and knowledge are also conditions that directly influence in the implementation process. A company that has a good planning, with well-defined action plans, indicators and responsible persons, will have a favorable condition. Likewise, the degree of knowledge on the model to be implemented, in conjunction with aspects related to the project management, will have an impact on the conduct of the program.

The top management support, in turn, is a condition that can change substantially how the implementation takes place. If there is a change in the management, for example, the intensity of the support may change. It is important that the decision of beginning an implementation come from de high management. The matter of convincing the management about the importance of the program influences and is influenced by the existence of a consistent planning. Therefore, the top management knowledge on the model to be adopted interferes directly in the support and commitment.

In light of the conditions established, actions and interactions arise. They are strategies that the organization undertakes in order to deal with the situations and problems belonging to the implementation process. The strategy of evolving people aims to keep the top management support and to motivate people through training and gains that they can have from the program. In the same line, keeping the communication is a necessary action to preserve a systemic perspective of the process and keep the individuals involved informed about what is happening. The action of controlling results aims to preserve what was planned and to keep the organization on the desired direction.

The consequences or results of the actions and interactions undertaken, or of their lack, are the change of culture and the competitive skill. Pursuant the efficiency of the company in evolving people, keeping the communication and controlling results, there will be more or less satisfactory consequences. In Fig. 1, the model that represents the substantive theory “A phase of change and learning” is presented.

Change and learning happen when the company succeed in the implementation, but also when the initiatives fail. In case of success, the organization will be more developed and in a

superior evolutionary level, characterized by the acquisition of competences to deal with change. In case of failure, there was a change to an inferior stage, for resources have been spent and the return has not happened. In this case, the resistance to change is increased, which will hamper new initiatives related to the implementation of performance improvement methods. Hereinafter the categories are described with their subcategories, properties and dimensions.

#### *Knowing the reality of the company*

This category highlights the importance of knowing the daily business live of the company, of analyzing and compiling data about the current situation before making any decision. The understanding of the productive and managerial process, the reality of the departments, the size of the company, the culture and the type of market enable the use of the existing strong points, as well as their adequacy with the concepts established by the performance assessment and improvement model. On the other hand, the inobservance of these points can lead to the failure of implementation, for example, because of the necessity of miraculous investments and extreme structure changes.

[...] because otherwise nobody gives opinions and it stays just on the literature or on the example of another company. It is what I said, what happens in the other companies happens in the other companies, it is not a recipe, it cannot be simply implemented as a dish, which you tell me what the ingredients are and I just cook it. (L1).

We have already participated in some works done by consultants in which, sometimes, it is imagined that there is a recipe, but to develop an enduring work, we know that it always needs to be a flexible tool, because even if the problems are similar, the work will never have the same recipe than the other used. (M2).

Each subcategory of the reality of the company can also be analyzed in more details. In this sense, deeper levels of analysis appeared, as it can be observed in Table 3.

Table 3  
Category knowing the reality of the company.

Knowing the reality of the company: The company needs to consider its particularities and to verify if they are consistent with the proposed model		
Subcategory	Property	Dimensional variation
Context	Size	Small–big
	Sectors	Administrative–productive
	Market	Standard–different
Culture	Organizational environment	Favorable–unfavorable
Processes	Productive	Mass–small scale
	Managerial	Routines–projects
Coordination unit	Dedication	Partial–exclusive
	Composition	Eventual–permanent
	Autonomy	Low–high

Source: Prepared by the authors.

In Table 3 the subcategories, properties and dimensions of the category knowing the reality of the company are described. It is highlighted that it is necessary to pay attention to the context in which the company is. Specific actions must be taken according to the size of the company, its internal sectors and the market in which it acts. Another subcategory is related to the culture, highlighting the necessity of a previous analysis of the organizational environment.

Regarding the processes, the attention is drawn to the necessity of a productive sphere, since companies with serial production will have different demands of companies with small-scale production, as it was reported by the case L. Within the managerial processes, the tendency is that companies with tradition in project management have an easier time implementing improvements than the ones guided by the routine management. Finally, the importance of a coordination unit is highlighted.

### Planning

Planning, as the Reality of the Company, is a category of the substantive theory “A phase of change and learning”. Thus, it is highlighted that a condition to have a successful experience in the operationalization of assessment and performance improvement models is planning. It, preferentially, must be aligned with the strategic planning of the organization.

I think that planning is the most important part of a project and I think that Brazilians err a lot on this. (D1).

This part of alignment with the strategic planning, which I think that is a very interesting thing, that a few companies make. (B2).

Developing a planning is an essential condition in the implementation process of assessment and performance improvement methods. A business environment that is not familiar with this practice will have great difficulties in conducting its program and having great success in its actions. A well-elaborated planning should provide conditions for the organization to orient toward which directions it should follow and which objectives it should achieve. It should also provide assessment mechanisms

Table 4  
Category planning.

Planning: To ensure that the company is closer to achieve good results with the implementation, it is necessary that priorities are established in the managerial and operational levels		
Subcategory	Property	Dimensional variation
Activities	Priorities	Managerial–operational
Costs/investment	Equipment and technology	Adequacy–acquisition
	Qualification	Internal–external
	Dedication	Partial–exclusive
Action plans	Deadlines	Parcial–total
	Responsible person	Operational–management
Return	Indicators	Tangible–intangible
	Processes	Productive–managerial
	Image	Internal–external

Source: Prepared by the authors.

of actions and possibilities of corrections in cases of inconsistencies.

In relation to planning, Table 4 evinces the subcategories costs/investments, action plans and return. Regarding the costs/investments, it is necessary to consider whether or not it will be necessary to acquire equipment and technologies. In the same line, it is relevant to plan if the qualification of the personnel involved will need external support or will be done by the company itself. Moreover, the matter of dedication is evinced, the greater the dedication, the greater the expenditure of financial resources, considering that the employee will not make his/her routine tasks to dedicate to the implementation.

Regarding the action plans, it was deemed convenient to dismember the deadlines in a specific property, due to their importance. They must be planned in partial and total terms. It will be also necessary to define responsible persons coming from the operational and managerial spheres, and be attentive in relation to the indicators, considering tangible and intangible aspects. Finally, it is highlighted the matter of planning the return on the context of the productive and managerial processes and which gains there will be in these processes. In the same vein, it is deemed relevant to consider the gains related to the image of the company.

### Know-how

In this section, the category Know-how is presented. The importance of training people and making it clear to the management and the employees what will be done is highlighted. The support of professionals from outside the company who are reference in the area and are able to align theoretical and practical knowledge is important to the familiarization of the concepts, techniques and tools. Having a follow-up from the right people may contribute to a better use of the time and resources. The knowledge about project management may also help to the acquisition of effective results.

Table 5  
Category know-how.

Know-how: The greater the knowledge about the model, the greater the chances to succeed in the implementation		
Subcategory	Property	Dimensional variation
Model	Experience	Internal–external
Training	Involved people	Operational–managerial
External consultant	Knowledge about the sector	Unsatisfactory–satisfactory
	Knowledge about the model	Practical–theoretical

Source: Prepared by the authors.

To succeed in the application, the knowledge of the tools is essential, as well as its applicability first at the management level, and after, the work group must be informed through a mini-course and/or speech, so that the people initially involved in this work are able to understand the magnitude of the application of the tool. (C3).

So, for me, one of the main problems is the lack of instruction of our managers. This lack of instruction comes linked to the lack of motivation to make things happen, because what I do not know, I will often repel. People who do not know or are even not interested end up repelling and to not execute the methods that need to be executed so that the result effectively happens, this is an important point. (J1).

In the managers' comments, it is discussed about the importance that the responsible persons for the implementation know the method to be used. But, obviously, the organization not always have persons who have this knowledge. In these cases, it will be necessary to create these conditions by means of strategies that may take several directions, such as the hiring of external consultants, the training of internal agents and the learning by experiences.

In Table 5 the information related to the category Know-how is presented. The matter of the experience about the model to be implemented is highlighted. It is sought to know if the professional persons involved have already had experiences in other contexts or only inside the own company. The need to train the involved people in the operational and managerial scope is also considered. Finally, when there is the need to hire an external consultant, it is deemed relevant to consider this person's knowledge in relation to the company's operating sector and to the model to be implemented; it is desirable that this person has a satisfactory knowledge about the sector and a balanced knowledge between theory and practice of the model.

#### Top management support

The category Top management support highlights the involvement and commitment of the high hierarchic levels in the development process of the organization. The management support is a determining factor to the beginning and continuity of a performance assessment and improvement program. If the management does not show interest, the program ends up left out. In fact, it is often noticed that if there is no top management support, it is unlikely that the planning starts.

Table 6  
Category top management support.

Top management support: It is indispensable that the initiative comes from the higher levels and that they show support and commitment during the implementation phase		
Subcategory	Property	Dimensional variation
Time	Maturation	Months–years
	Dedication	Eventual–daily
Persuasion	Planning	Confuse–convincing
	Knowledge about the model	Superficial–deep

Source: Prepared by the authors.

No matter the action you wish to implement, without the support from the management, it does not move forward. (H1).

The top management support is one of the main conditions for a company to establish a change concisely. The high management will influence the other people to prioritize one of these projects. (E1).

And why are we where we are today? Because I had support from the partners who also compose the board of directors of the company nowadays. They supported everything I did here, everything I did in terms of method worked out, showed result, because I had support. (J1).

The matter of support is constituted of a very big obstacle to a large part of the companies. The management needs to be convinced that the program will bring returns, get involved with the process and know what has been done.

The category Top Management support is evinced in Table 6. The subcategory time is highlighted, with the properties maturation and dedication. In this regard, it is evidenced that the longer the maturation time, the more difficult it will be to keep the management support. Regarding the dedication, it is considered that an eventual support tends to be harmful to the implementation, because the involved personnel may start to lose credibility in relation to the importance of the program. It is also highlighted the subcategory knowledge. In this context, the property planning evinced that the more convincing it is, the higher is the probability of getting management support. In the same line, the greater knowledge about the model of the management, the greater its commitment and support will be.

#### Getting people involved

The category Getting people involved calls the attention to the necessity that all the hierarchical level need to be convinced and committed to the change. Involvement brings creativity and commitment, and is able to optimize the available resources. The shop floor personnel, for example, should feel that they own their own business, participate in meetings and present the results. The management level personnel, in turn, must be convinced that the initiative will work out and will bring returns. On the other hand, the involvement may not happen if the things are simply imposed.

Table 7  
Category getting people involved.

Getting people involved: People's involvement must happen since the beginning of the program and uphold during the implementation process		
Subcategory	Property	Dimensional variation
Explaining the gains	Function	Degree of effort reduction
	Financial	Specific increase–constant
	Status	Stagnation–appreciation
Listening to people	Meetings	Ocasional–routine
	Other channels	Formal–informal
Motivation	Presentation of the results	Participant–listener
	Training	Ocasional–continued

Source: Prepared by the authors.

An essential step is the awareness, from the chief executive officer to the guard, going through all of them. It does not mean that one is more important than the other, but everybody needs to know what really wants, and it must come from top to bottom, so that it affect the others. (I1).

And it is a lot about awareness, I see that it is the basic, both the management support and you really get to aware the shop floor personnel, tell them how that is important so that they embrace the idea. (C2).

In the process of getting people involved, it is important that the top management, together with the change agents, is able to show, in a clear and understandable way, which results will be achieved, not necessarily financial. People need to understand the need for change from the current status to a future one, when the company reaches a different excellence level, which will improve its performance, and, therefore, people will have better opportunities of professional growing.

In Table 7 the category getting people involved is highlighted, with its subcategories, properties and dimensions. The subcategory explaining the gain shows that people's involvement tends to be greater the greater the effort reduction to the duty is, and the clearer the matter of remuneration policy and the opportunities of professional growth are. Another point to be highlighted is related to the importance of listening to people. Meetings should be regular and productive and there must be several channels enabling people to keep an interaction with the management. Finally, it is emphasized how important it is to be concerned about people's motivation. This motivation can be acquired from people's involvement in the presentation of the results arising from the implementation (partial and total results) and through the continuous provision of professional training.

### Controlling results

The category controlling results highlights the importance of following the progress of the implementation. In this regard analyzing and demanding the results during the phase of operationalization of the model are fundamental activities. Action plans which have not been finalized yet may engender distrust and increase the resistance. It is important to establish indicators to compare it before and after, in order to present the progresses

Table 8  
Category controlling results.

Controlling Results: The consequences of the implementation will be more or less satisfactory depending on the efficacy degree of the control of the results of the program.		
Subcategory	Property	Dimensional variation
Analysis	Indicators	Unachievable–achievable
	Fullfilment of deadlines	Discredit–credibility
Maintenance	Coordination's dedication	Partial–integral
	New routines	Implementation degree

Source: Prepared by the authors.

made, so that the people feel the improvement and value the initiative.

Then a change process will only exist if you have a control process. So, if I don't have control of this implementation, I will never implement. I need to implement and control, implement and control all the time. If I don't control, deadlines, results, methods and quantities are lost. (J1).

This matter of deadlines, I honestly had a hard time, moreover, we have a model of project management, but I had to change the deadlines that I had already finished many times. (D5).

It is essential that the responsible persons for the sectors are involved in the initiatives, that assist in the development of the improvement, but they will not be directly controlling, demanding and managing the results. For this purpose, a specific coordination is necessary.

The information related to the category Controlling results are highlighted in Table 8. Again, the importance of the fulfillment of deadlines is highlighted because, according to the managers, this item is often decisive to the loss or not of the program credibility. Still in relation to the analysis, the necessity of other indicators is highlighted, which must include tangible and intangible aspects. Finally, the subcategory maintenance of the improvements shows that it has a direct relation of it with the coordination's dedication time (the longer, the better) and the implementation degree of the new routines.

### Communication

The category communication emphasizes the importance of an efficient transmission of the information relative to the implementation process. Many companies, when seeking the change of a situation do not pay the proper attention to the communication process. The idealizers of the change cannot put themselves in the clients' and in the people who compose the company's place.

Not only in projects, but I say in the company in general. I have been managing this section for eight years and, without a doubt, most of our problems are related to communication, are communication failures. (D1).

Keeping the personal motivated and happy and knowing the results, that the time they spent to something is essential. So,

Table 9  
Category communication.

Communication: The organization must establish a structure that enables people from all the hierarchical levels and sectors to communicate.

Subcategory	Property	Dimensional variation
Between sectors	Committee	Diversified–centralized
	Data transfer bottleneck	Rare–usual
Between hierarchical levels	Feedback	Exception–daily
	Knowledge transfer	Confuse–didactic

Source: Prepared by the authors.

the communication should be kept fine and the feedback is essential. (E1).

Keeping the communication is a valuable action that needs to be worked during the implementation process. The communication must be clear and efficient in order to avoid data transfer bottleneck and keep the motivation and commitment of the group involved.

In Table 9, the category Communication is evinced, with its subcategories, properties and dimension. It is highlighted the importance of the existence of a committee with diversified formation in order to keep the communication between the sectors. In the same line, attention is drawn to the fact that the lack of communication between sectors may result in data transfer bottleneck. The other subcategory emphasizes the importance of the communication between the hierarchical levels. In this regard, the managers assert that the feedback must be a regular practice and that the transmission of knowledge should be done as didactically as possible, considering the training levels of the involved people.

### Change of culture

When the change of culture happens, the company has a change in its profile, and in its development standard. Depending on the case, the reflection of the change may be the introduction of a great professionalization in the processes and in the standards of the company, the integration of a mindset oriented to waste reduction and value creation and other transformations, according to the premises of the model employed in the change program.

Then from the moment that people create this culture inside the company, they already seek to bring ideas, seek improvement themselves, without having to concern the top management or, sometimes, the boss or something like that. They already go, they have autonomy to seek improvements. (A1).

The change of culture is important, mainly the matter involving any change that can have in productivity, is essential. (I2).

The category change of culture evinces that if the implementation is successful, it can provide to the organization, besides the implementation benefits, internal capabilities to deal with future situations of change, once there will be a transformation

Table 10  
Category change of culture.

Change of Culture: There is no possibility that the implementation happens satisfactorily if there is not a change of culture in the organization.

Subcategory	Property	Dimensional variation
Change of people	Resistance to change	Boycott–commitment
Change in the processes	Managerial	Functional–matrix
	Productive	Unchanged–new routines

Source: Prepared by the authors.

in the organizational processes and they will be more adapted to face the constant pressure for development and competitiveness improvement.

The category change of culture represents a consequence of the implementation and is represented by Table 10. A successful implementation will reflect directly in the inexistence of boycotts in relation to the improvements and people's consequent commitment with the cause. It indicates that it was possible to diminish people's aversion to changes. The subcategory change in the processes, in turn, evinces that the managerial processes tend to become more focused to the matrix standard and, in the context of the productive processes, they were changed through the institutionalization of new routines.

### Competitive ability

The category competitive ability highlights the gains derived from the implementation and their reflection on the competition capability of the organization. It is stressed the concern about associating the economic return of the improvement program to a socio-environmental one, a return regarding safety at work and improvement in the productivity.

For example, here in our company, to supply the automotive market, we need to have certification from ISO, which is ISO TS, for automotive. So, several competitors have the capability but don't have this certification and cannot supply the automotive market. (I2).

We have had cases when we decreased 60, 70% the index of loss. It affects directly in our competitive performance. (C1).

Another highlighted point in relation to the gain added is related to the image of the company, which can be enhanced through the acquisition of certifications, awards and participation in social events. The implementation of improvement programs must be something that influences positively the company's growth and its skills to compete.

The category competitive ability, highlighted in Table 11, also represents a consequence of the implementation. It is configured from the subcategories profitability, productivity and image. Profitability highlights that a successful implementation achieved positive economic–financial results and there was cost reduction. The subcategory productivity evinces that an improvement in the matter of safety at work happened, reflecting directly in the productive efficiency. Similarly, the increase of the efficiency from the improvements verified in the duties

Table 11  
Category competitive ability.

Competitive ability: The successful implementation will provide increase in profitability, improvement in the productivity and improvement of the image of the organization.		
Subcategory	Property	Dimensional variation
Profitability	Economic-financial Costs	Negative–positive Increase–reduction
Productivity	Safety at work Improvement in duty	Unchanged–increase Unchanged–greater efficiency
Image	Certifications Awards	Without–with Unchanged–recognition

Source: Prepared by the authors.

was observed. Finally, the subcategory image indicates that the company that succeeded in the implementation, depending on the model considered, got a certification that will differ it over the competitors. Another way to improve the image is the recognition of the company before society, such as acquiring awards related to environmental management actions, social responsibility and others.

### Revisiting literature

After the presentation of the results, the literature review is revisited. At this part of the work, it is presented an approach of the results of the substantive theory “A phase of Change and Learning” with emerging results from the technical literature. It was stressed that many aspects presented in the categories are also described in technical literature (observed in Table 12).

In the category about the reality of the company, literature highlights aspects such as the financial situation and the environment stability (Albertin, 1996; Beber et al., 2006; Waal & Counet, 2009). Planning is considered by literature, mainly, related to the existence of plans and goals (Albertin, 1996; Al-Mashari & Zairi, 1999; Hashmi et al., 2015; Valentim et al., 2014).

The knowledge about the method, highlighted in the substantive theory, appears with certain regularity in literature, highlighting the matter of the consultant and of the alignment of the system (Al-Mashari & Zairi, 1999; Beber et al., 2006; Rocha-Pinto & Del Carpio, 2011; Valentim et al., 2014). Likewise, the top management support is described by the authors as one of the mains factors to be considered (Albertin, 1996; Beber et al., 2006; Bourne et al., 2002; Burlim et al., 2007; Prieto, Pereira, Carvalho, & Laurindo, 2006; Scherer & Ribeiro, 2013; Valentim et al., 2014; Waal & Counet, 2009).

Another factor highly evidenced in the substantive theory and in literature (Al-Mashari & Zairi, 1999; Scherer & Ribeiro, 2013; Sena & Guarnieri, 2015; Valentim et al., 2014; Waal & Counet, 2009) was people’s involvement. However, the control of the results, despite being evident in the substantive theory, is not often highlighted by literature, being more emphasized in Waal and Counet’s (2009) work. Communication, in turn, seen as a relevant factor in the substantive theory, is not evinced in literature, being remembered occasionally, as in Deus et al. (2014).

Table 12  
Comparison between substantive theory and literature.

Category	Aspects approached	
	Substantive theory	Literature
Reality of the company	Context, culture, processes, coordination unit	Resources, capabilities, instability, culture
Planning	Priorities, action plans, cost/investment, return	Objectives, Project management, plans, control, indicators
Know-how	External consultant, training, experience	External consultant, knowledge, ability
Top management support	Time, persuasion	Commitment, leadership
Getting people involved	Explaining the gains, motivation, listen to people	Resistance, lack of involvement
Controlling results	Analysis, maintenance	Internal control, maintenance, focus
Communication	Between sectors, hierarchical levels	Dissemination of information, systemic perspective
Change of culture	Persons, processes	Culture of performance management
Competitive ability	Profitability, productivity, image	Benefit of the results

Source: Prepared by the authors.

The change of culture, in turn, is not seen by literature as a consequence, but as a condition (Bourne et al., 2002; Dolci et al., 2015; Rosa & Cauchick Miguel, 2012; Scherer & Ribeiro, 2013; Trad & Maximiano, 2009; Waal & Counet, 2009). In the substantive theory, the culture is seen as a process that keeps being worked out and constitutes a result arising from the implementation. Finally, the competitive ability, described in the substantive theory as a result, is generically characterized in literature, as improvement in performance. Attention is drawn to the fact that the substantive theory is able to integrate several terms, whereas literature presents them in specific situations, diluted in several studies.

The substantive theory enables a systemic perspective of the phenomenon by means of the comprehension and integration of the categories. Under this perspective, it is possible to notice, for example, that in order to obtain the Top Management Support, it is fundamental to have a good Planning. Similarly, the Top Management Support is fundamental to the existence of a Coordination Unit, which, in turn, will interfere directly with the efficiency of the Control of Results. These relationships emerged from the data, as observed in Table 13.

Thus, the substantive theory presented gest to integrate and relate the main aspects that describe the implementation phenomenon. It is also highlighted that the fact that there is

Table 13  
Example of relationships between categories.

Categories	Evidences	Effects
Developing a planning/top management support	It is necessary to aware the directors and show them the necessity of the program, that the improvements do not happen overnight, but in medium and long term, this aspect is fundamental. (J1). Because if you show only the cost of the implementation and not when the return will come, how this return will come, who will support it? (I2).	Planning is one of the “weapons” that can be used to aware, persuade and obtain the top management support. The barrier created by the Brazilian entrepreneurs’ short-termism view can be overcome through an effective planning.

Source: Prepared by the authors.

convergence between some results of the substantive theory and of literature does not make the first less relevant, before that, it contributes to the strengthening of the model.

### Final considerations

At the beginning of this study, the high index of failure in the implementation of performance improvement methods was referred. Literature has presented results confirming this situation. Studies alert about the necessity of the companies in creating a favorable environment that allows the achievement of effective results and promotes the organization’s development.

In the substantive theory “a phase of change and learning” aspects inherent to the implementation process are listed. These aspects provide information that can assist in understanding the difficulties faced by the organizations to promote the necessary change from a problematic status to a more developed one. It happens due to the complexity inherent to the implementation process, ranging from more rational matters, such as the knowledge about the model to be implemented, to more behavioral matters, such as people’s involvement. It is considered that, from the proposition of this theoretical model, the objective of this study was totally achieved.

One of the main contributions of this study is its support to managers in the sense of making the improvement programs more useful to the organizations. The substantive theory is proposed starting from a language derived from the organizational environment, in which the use of complicated and very technical terms is avoided, in order to facilitate the managers’ understanding, who are effectively going through difficulties in their organizational development programs.

In view of what has been exposed, this study presents some aspects that differentiate it from the existing works that approached the implementation theme. At first, it is cited the use of the grounded theory methodology, which provides the generation of a substantive theory on the theme. There is no knowledge about studies developed with this purpose. The

second aspect to be highlighted in terms of originality is related to the choice of the cases. In these terms, cases located in the State of Santa Catarina were approached, which are from different areas of activity and use (or used) different performance improvement models. It is believed that this diversity of experiences strengthen the results presented and confers originality to the theoretical model proposed, considering that the existing studies focused on specific models. Finally, it is highlighted that the results arose from the reality of the managers from the substantive context investigated.

For future studies, it is suggested the replication of the model presented to other realities, using the proposed categories as guides to data collection and analysis. In this study, some themes were highlighted marginally, such as the costs to the companies that cannot succeed in such programs. In this regard, it is suggested to better explore this horizon, including, also, the use of grounded theory, in order to make it clear to managers and academic students that the high failure rate in the implementations highlighted in literature is something serious and can be the responsible for the loss of competitive capability of the organizations.

### Conflicts of interest

The authors declare no conflicts of interest.

### References

- Albertin, A. L. (1996). Aumentando as chances de sucesso no desenvolvimento e implementação de sistemas de informações. *Revista de Administração de Empresas*, 36(3), 61–69.
- Al-Mashari, M., & Zairi, M. (1999). BPR implementation process: An analysis of key success and failure factors. *Business Process Management Journal*, 5(1), 87–112.
- Attadia, L. C. L., & Martins, R. A. (2003). Medição de desempenho como base para a evolução da melhoria contínua. *Revista Produção*, 13(2), 33–41.
- Beber, S. J. N., Ribeiro, J. L. D., & Neto, F. J. K. (2006). Análise da causa do fracasso em implantações de BSC. *Revista Produção*, 6(2), 1–22.
- Bourne, M., Neely, A., Mills, J., & Platts, K. (2003). Why some performance measurement initiatives fail: Lessons from the change management literature. *International Journal of Business*, 5(2/3), 245–269.
- Bourne, M., Neely, A., Platts, K., & Mills, J. (2002). The success and failure of performance measurement initiatives: Perceptions of participating managers. *International Journal of Operations & Production Management*, 22(11), 1288–1310.
- Büscher, A. (2007). *Negotiating helpful action: A substantive theory on the relationship between formal and informal care* Thesis (Academic Dissertation). Finland: Department of Nursing Science, University of Tampere., 195 p.
- Charmaz, K. (2009). A construção da teoria fundamentada: guia prático para análise qualitativa. *Porto Alegre: ARTMED*.
- Deus, R. M., Seles, B. M. R. P., & Vieira, K. R. O. (2014). As organizações e a ISO 26000: Revisão dos conceitos, dos motivadores e das barreiras de implementação. *Gestão & Produção*, 21(4), 793–809.
- Dolci, D. B., Lunardi, G. L., & Salles, A. C. (2015). Implementation of green IT in organizations: A structural view. *Revista de Administração de Empresas*, 55(5), 486–497.
- Frederico, G. F., & Martins, R. A. (2012). Modelo para alinhamento entre a maturidade dos sistemas de medição de desempenho e a maturidade da gestão da cadeia de suprimentos. *Gestão & Produção*, 19(4), 857–871.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine de Gruyter.

- Goessler, L. G. M. (2009). *Uso de Sistemas de Medição de Desempenho para Melhoria Contínua: Um estudo da Influência do Estilo de Gestão* Tese (Mestrado). São Carlos: – Universidade Federal de São Carlos., 120 p.
- Gomes, L. C., & Neto, F. J. K. (2015). Métodos colaborativos na gestão de cadeias de suprimentos: Desafios de implementação. *Revista de Administração de Empresas*, 55(5), 563–577.
- Gonzalez, R. V. D., & Martins, M. F. (2007). Melhoria contínua no ambiente ISO 9001:2000: Estudo de caso em duas empresas do setor automobilístico. *Revista Produção*, 17(3), 592–603.
- Hashmi, H., Khan, N. R., & Haq, M. A. (2015). The impact of lean management implementation on organizational operational performance. *LogForum*, 11(4), 375–385.
- Hwang, D., Yang, M. G., & Hong, P. (2015). Mediating effect of IT-enabled capabilities on competitive performance outcomes: An empirical investigation of ERP implementation. *Journal of Engineering and Technology Management*, 36, 1–23.
- Lage, M. C. (2011). Utilização do software NVivo em pesquisa qualitativa: uma experiência em EaD. *ETD Educação Temática Digital*, 12(1), 198–226.
- Lima, G. B., Carvalho, N. C., & Herkenhoff, D. A. (2010). Avaliação de desempenho baseada na ISO 9004:2000: Estudo de caso em uma empresa de manutenção. *INGEPRO – Inovação, Gestão e Produção*, 2(6), 96–107.
- Madapusi, A., & D'Souza, D. (2012). The influence of ERP system implementation on the operational performance of an organization. *International Journal of Information Management*, 32, 24–34.
- Neely, A., & Bourne, M. (2000). Why measurement initiatives fail. *Measuring Business Excellence*, 4(4), 3–7.
- Prieto, V. C., Pereira, F. L. A., de Carvalho, M. M., & Laurindo, F. J. B. (2006). Fatores críticos na implementação do *Balanced Scorecard*. *Gestão & Produção*, 13(1). São Carlos.
- Rocha-Pinto, S., & Del Carpio, G. (2011). Fatores críticos para a implantação do *balanced scorecard*: A visão de consultores organizacionais. *Revista Base*, 8(4), 311–324.
- Rosa, C. A., & Cauchick Miguel, P. A. (2012). Adoção do programa Seis Sigma em um fornecedor automotivo: Análise de fatores relevantes na implementação. *Teoria e Prática em Administração*, 2(2), 151–172.
- Scherer, J. O., & Ribeiro, J. L. D. (2013). Proposição de um modelo para análise dos fatores de risco em projetos de implantação da metodologia lean. *Gestão e Produção [online]*, 20(3), 537–553.
- Schmidt, P., Santos, J. L., & Martins, M. A. (2006). *Avaliação de empresas: Foco na análise de desempenho para o usuário interno*. São Paulo: Atlas.
- de Sena, A. S., & Guarnieri, P. (2015). Enterprise resource planning governamental: A percepção dos servidores atuantes do projeto Ciclo do Ministério da Justiça quanto à implementação. *Revista de Administração Pública*, 49(1), 207–230.
- Silva, C. E. S., & Araújo, F. (2006). Relação entre melhoria contínua e o sistema de avaliação de desempenho – estudo de caso em malharias retilíneas. *GEPROS*, 1(2), 149–162.
- Spessatto, G., & Beuren, I. M. (2013). Análise das diferenças na implantação do *Balanced Scorecard* nas maiores empresas da região sul do Brasil. *Gestão e Produção*, 20(2). São Carlos.
- Strauss, A., & Corbin, J. (2008). *Pesquisa qualitativa: Técnicas e procedimentos para o desenvolvimento de teoria fundamentada* (2ª ed.). Porto Alegre: Artmed.
- Trad, S., & Maximiano, A. C. A. (2009). Seis sigma: Fatores críticos de sucesso para sua implantação. *Revista de administração contemporânea*, 13(4). Curitiba.
- Waal, A. A., & Counet, H. (2009). Lessons learned from performance management systems implementations. *International Journal of Productivity and Performance Management*, 58(4), 367–390.
- Valentim, O. A., Politano, P. R., Pereira, N. A., & Araujo Filho, T. (2014). Análise comparativa entre a implementação e atualização do sistema ERP R/3 da SAP considerando os fatores críticos de sucesso descritos na literatura. *Gestão & Produção*, 21(1), 111–124.
- Wali, S., & Boujelbene, Y. (2011). Cultural influences on TQM implementation and financial performance in Tunisian firms. *Ekonomika a Management*, 30(3), 30–45.
- Walter, O. M. F. C., & Tubino, D. F. (2013). Métodos de avaliação da implantação da manufatura enxuta: Uma revisão da literatura e classificação. *Gestão e Produção*, 20(1), 23–45.