

Organizational Improvisation In The Perspective Of Interpretative Schemes: A Bibliometric Analysis

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Abstract:

Background: The versatility and tension of the setting in which organizations are integrated have been forcing them to develop new abilities where improvisation and interpretative schemes have gained room in this scenario. Therefore, this study intends to present a panorama of the Brazilian and international scientific production on the topic of Organizational Improvisation.

Materials and Methods: For this purpose, a bibliometric research was developed using the Scopus and Spell databases, obtaining a final sample of 48 scientific papers from 1998 to 2019.

Results: As a result, it was verified that the publication average over the past eleven years is higher than the average from the former eleven. Similarly, to the United States, Brazil has stood out in terms of membership institutions and authors. However, the most fruitful author is Portugal. Most research are theoretical.

Conclusion: These results suggest opportunities for more empirical researches and a further development in the comparison between productions and on the topics dealt by them.

Key Word: Organizational improvisation; Interpretative schemes; Bibliometrics.

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I. Introduction

For organizations to survive, they essentially depend on the analyses and responses that they give to their actions in the setting of internal and external environs. Such responses act simultaneously and are mutually influenced, according to a set of fundamental factors such as situational duress, where circumstances compel organizations to act, move, and organize themselves; the way in which the organization behaves is given according to prominent values and interests. Thus, interpretations and actions present themselves as consequences of a material manifestation and act as an intermediate factor in understanding the environment and its pressures, narrowing performance options and influencing on the choice of the most appropriate solution actions. In the search of new approaches on organizations, there is the improvisation concept (Cunha, 2002).

Organizational improvisation appears as a significant and important process for the competitive environment where organizations are placed in, which requires readiness and swiftness in decision-making processes (Baker, Miner & Eesley, 2003). As illustrated by the Jazz metaphor (Flach & Antonello, 2011), such improvisation is comprised of the combination of decisions taken from authentic actions, involving development jointly with execution, in which managers are spontaneously guided by intuition (Crossan & Sorrenti, 1997). It is a matter of a spontaneous, creative, and unplanned process with the purpose of meeting a goal by means of a new, useful way for the situation (Flach & Antonello, 2011). The use of improvisation can help organizations to be more efficient in dealing with changes and complex situations, thus broadening their knowledge capacity, with greater flexibility and swiftness in developing actions and giving immediate responses at the expense of planning (Hatch & Weick, 1998).

In view of such relevance, the following research question is asked: what is the scientific production setting concerning Organizational Improvisation? The overall goal is to present a panorama of the Brazilian and international scientific production on the topic of Organizational Improvisation. In order to do so, a bibliometric study was carried out. After this introduction, the theoretical background, methodological proceedings adopted, results found, and final considerations are presented.

II. Interpretative Schemes and Improvisation in Organizations

Interpretative schemes can be understood as a set of values and beliefs shared by members of an organization that act as reference frameworks for organizational action (Machado da Silva & Fonseca, 1994). The use of interpretative schemes in organization analysis originated from Giddens' Structuration Theory (1989), where structure, modality and interaction interplay with the institutional dominion and action dominion (Takahashi & Cunha, 2005).

Interpretative schemes define, restrict, and set references for the appropriate dominion of organizational operations, for organizational principles, and for assessment criteria of organizational development. Therefore, as they are comprised by shared values and beliefs that guide organizational choices, they act as mediation components in adopting action strategies. Concerning organizational interpretation, Daft and Weick (1984, p. 286) define it as “the process of translating events and developing shared knowledge and conceptual schemes between high management members”.

The conception of interpretative schemes displays the cognitive plan that maps world experiences, identifying its relevant aspects and how we understand them (Ranson, Hinings & Greenwood, 1980). Thus, interpretative schemes portray, through their concepts, organizations’ values and their interests which are conceived in the validity and legitimacy of the organization structure (Bartunek, 1984).

Although there are forces pushing for a homogenization of organizations, DiMaggio and Powell (1983) defend that interpretative schemes determine different courses in view of said existing environmental pressure, encouraging different actions and strategies in organizations belonging to a same sector. Interpretative schemes are those which guide strategies, furnishing a certain world and environmental view (Machado da Silva, Fonseca & Fernandes, 1999).

For Machado da Silva, Fonseca, and Fernandes (1999), the organizational managers’ reorientation of interpretative schemes generally occurs by force of considerable environmental pressures. The authors also add that changes in mental models may occur in two circumstances: when learning suffers from low quality and involves developmental transformations or lesser adjustments, as changes are behavioral than knowledge; or when learning is of high quality, which involves considerable transformations in the understanding and restructuring of organizational members’ mental models. Managers’ interpretative schemes offer an explanation on how organizations effectively deal with their changing environments, how they identify appropriate responses and revamp themselves (Takahashi & Cunha, 2005).

It is important to highlight, as per the arguments of Machado da Silva, Fonseca e Fernandes (1999), that changes tend to be slow, as values and beliefs are deeply entrenched and confer stability to people and organizations. When successful, past strategies tend to be maintained, even before environmental variations. This insistence on past behaviors can happen by financial reserves or psychological reserves. Financial reserves are due to the profit margin obtained and due to the organization’s survival; whereas psychological reserves are due to the managers’ beliefs that they can overcome, by themselves, the obstacles presented.

Daft (2007) defines the interpretation process into three subsequent stages, beginning in tracking (data collection), followed by data interpretation and then, finally, learning from the data, which is demonstrated from action making. For an interpretative system model, the base idea is still attached to these three pillars, but factors on the organizational environment and whether organizational intrusion is active or not are also considered.

The debate on improvisation in Brazilian research was originated by the Jazz Forum and New Organizational Formats in 2002, created by Fundação Getúlio Vargas (FGV) that collaborated for the development of research on this topic, linking the musical genre and organizational improvisation with the publications of the following authors: Weick, 2002; Hatch, 2002; Cunha, 2002. As for international studies, the debate on this type of research has been incited in congresses since 2002 by the Center for Creative Inquiry together with the Academy of Management and the International Network for Time in Management and Organizations (Aranha & Garcia, 2005).

Improvisation takes place when individuals entrenched in a system structured with routines need to find quick, novel or innovative solutions and answers to solve unforeseen issues (Weick, 1998); it occurs through the application of strategic planning, when there can be intrusions from the external environment, pushing organizations to change their planning. The use of organizational improvisation enables the support to dynamic understanding and subjectivity of organizational daily life, as it offers grounds to analyze and identify topics which were misinterpreted (Aranha & Garcia, 2005).

The Jazz metaphor is frequently used to explain and study organizational improvisation, since, in this musical genre, musicians perform without previous planning. Jazz improvisation happens naturally, as musicians require quick responses to any event or mishaps that take place during performance (Weick, 1998). The study of organizational improvisation is recent, however, there are a number of academic works surrounding this topic already (Cunha, 2002).

This comparison between Jazz and organizational improvisation expresses a new way of conflict resolution in organizations. The analogy resorts to the knowledge and ingenuity of employees, thus aiding in versatility and broader understandings, resulting in a better yield of skills in different areas with harmony and discourse (Martinho, 2014).

Improvisation cannot be excessively recurrent in organizations, as the absence of planning and management result in chaos, making it difficult or even preventing organizations to be successful - especially in the current setting of organizations and the business world (Flach, 2012). But it is important that organizations

continue to execute planning, control, and management, without neglecting organizational improvement when required.

It is substantive to organizations that routine and improvisation are in harmony for activities to be performed. There is no such organization with only routine or improvisation, but it is possible that there are successful organization both with routine and improvisation. It is necessary that the managers involved with the organization think, innovate, and create, encompassing their personnel in the processes. When this takes place, people start to have a better understanding of what happens in the environ they perform their tasks and, furthermore, there is no such organization that can only work with pre-determined routines. (Kirschbaum, Sakamoto & Vasconcelos, 2010).

The improvisation process within organizations is more frequent that researchers and business-owners can notice (Barrett, 1998). Despite managers and owners working with strategical planning to prevent unexpected events, working with administrative control and routines, improvisation is part of the decisions taken in organizations' daily activities (Crossan & Sorrenti, 1997).

According to Flach and Antonello (2011), organizational improvisation is comprised of the following features: time, which influences the improvisation process; improvisation which works with bricklaying; improvisation possesses and surpasses structures; pauses and silence are also part of the improvisation process; improvisation which can be individual or collective; improvisation which can be based on clichés and topics repetition or variation; faults are deemed part of improvisation; joint improvisation requires continued negotiation and dialog and its performance is essential in the improvisation act.

Therefore, the importance of Weick's "improvisation" concept is substantiated, illustrating distinctive ability of public and private managers in the pursuit of satisfactory results, even if they are performing with the same structural limitations, i.e., the ability of performing from improvisation. In this sense, interpretative schemes comprise the set of values and beliefs that conditions perceptions and interpretations, guides decisions and conditions what and how the organization acts.

III. Material And Methods

This research is characterized as a bibliometric study. According to Martins and Silva (2005), bibliometric analysis quantifies scientific production and its reach. Leite Filho (2006) adds to it by saying that bibliometric performance indicators are useful for assessing academic research, as well as guiding the direction and strategy of research sponsoring.

In applied social sciences, the use of bibliometric studies is centered into researching the production of papers on a specific topic, schematizing academic research and identifying the main researchers (Okubo, 1997). This type of research is focused on quantifying productions through keywords, however, it does not intend to perform study content analysis (Daim, Ploykitikon, Kennedy & Choothian, 2008).

The methodological choices were based on other bibliometric studies from the management area, such as Heinzmann and Valadão Júnior (2016), Silva, Rosa and Martiniano (2019) and Araújo, Silva and Abdala (2020). Figure 1 details the research proceedings.

One of this research's purpose was to cover international and Brazilian production on the topic of Organizational Improvisation. Thus, two representative bases from this production were selected, respectively: Scopus and Spell. Scopus' use is supported by Dybå, Dingsøyr and Hanssen (2007) and Engström, Runeson and Skoglund (2010), as it is a base that covers the main journals and conference annals. Spell (2019), on the other hand, was chosen because it is a Brazilian electronic repository created by Associação Nacional de Pós-Graduação e Pesquisa em Administração (ANPAD) and Instituto Brasileiro de Estudos e Pesquisas Sociais (IBEPES) which promotes, mainly, production organized visibility of Brazilians journals in the management area. The research limits itself to final papers published in Management-related areas.

In a previous moment, it was not limited to queries in a temporal period. For the inclusion of articles to the final sample, abstracts were read in order to confirm whether they covered the topic at interest or not. Therefore, of the 56 articles, 48 comprised the material for analysis. Eight articles were ruled out after abstracts were read for not covering the topic. Considering this number, at last, it was decided not to restrict the analysis period so as to study all of them through reading. A database was created in the Excel® application given convenience furnished for accounting the variables considered in this study, to perform calculations and graphical representations of analysis foci. Specifically, the work cloud was created in the free software WordArt.com. The work will now cover the results presentation.

Database	Scopus	Spell
Terms and Search Fields	"Organizational Improvisation" and "Improvisation in organization(s)" in title, abstract, and keywords.	"Improvisação Organizacional" and "Improvisação na(s) organizações" in title, abstract, and keywords.
Other Filters	Knowledge area: Business, Management and Accounting. Type of document: final papers.	Type of document: final papers.

Period	No restrictions.	
Number of Articles Found	39	17
Number of Articles After Reading Abstract	37	11
Final Sample	48 articles	
Analysis Variables	Year of publication; journal name; authors names; membership; country; number of authors per article; keywords; study scope; research approach; data collection technique; data analysis technique; main article contributions.	
Analysis Focus	Number of yearly publications; publication per journal; authors' country and membership; prolific authors; research characterization; word cloud; main article contributions.	

Figure 1. Detailing of Research Methodological Proceedings

Source: prepared by the authors.

IV. Result and Discussion

In this section, the bibliometrics results are presented on Organizational Improvisation. For this purpose, the analysis foci order is used as presented in Figure 1. It starts with the number of articles published per year.

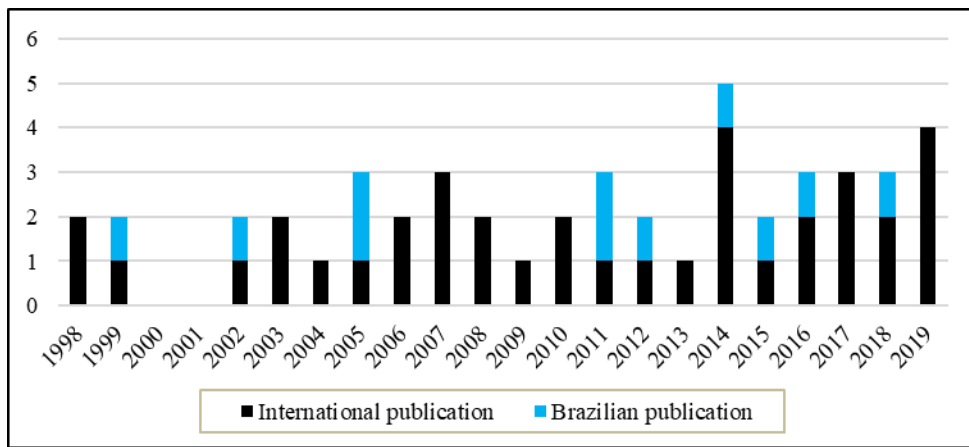


Figure 2. Number of Articles Published Per Year

Source: prepared by the authors based on research data.

Figure 2 shows that there were publications from 1998 to 2019, except for 2000 and 2001. The year with most publications was 2014. In addition to showing the number of articles published per year, Figure 2 also shows on what years there were international and Brazilian publications. Thus, despite the Brazilians journals production accounting for 22.9% of the final sample, it can be observed that in 2005 and 2011, the number of Brazilians publications was higher than that from international publications in said years.

Further analysis was carried out regarding journals in which the analyzed articles were published. In total, articles were published in 40 different journals, being 8 Brazilians and 32 international. Figure 3 shows the 7 journals that had more than one publication on the topic. The Organizações & Sociedade journal is highlighted, being that of higher publication, individually, in the analyzed sample, in addition to being a national journal. Moreover, 26 articles (75.0%) were co-authored and the remaining 12 (25.0%) had only one authors.

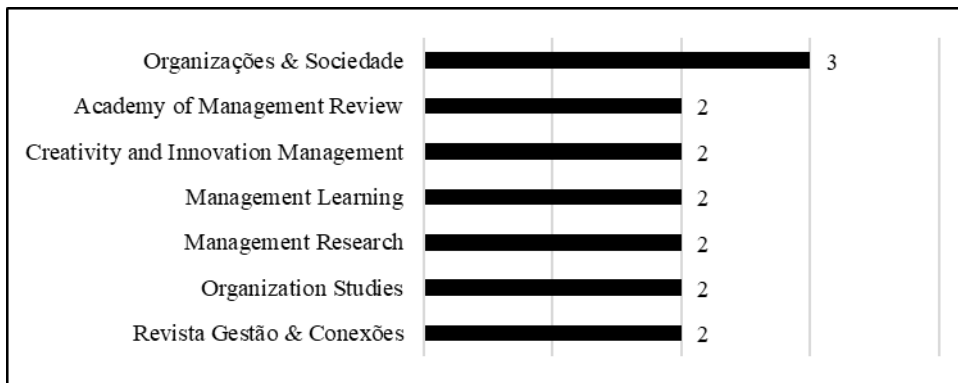


Figure 3. Journals with Most Articles Published in the Sample

Source: prepared by the authors based on research data.

It was also observed that articles were written by only 76 different authors, which were members, on the date of this publication, of 60 different education institutions, with the exception of two authors. These institutions are located at the following countries: Germany; Australia; Austria; Brazil; Canada; China; Denmark; United States; Finland; France; Hong Kong; Italy; Portugal; United Kingdom. In terms of institutions, the United States is the largest representative with 18 institutions (30.0%), followed by Brazil with 11 institutions (18.3%). In terms of authors, the same countries were also highlighted: United States with 24 authors (31.6%); followed by Brazil with 15 authors (19.7%). To further analyze this matter, a ranking of the most prolific authors is presented.

Table 1
Ranking of Most Prolific Authors

Ranking	Author	Number of Articles as Author
1st	Miguel Pina e Cunha	14
2nd	João Vieira da Cunha	6
3rd	Leonardo Flach	4
	Stewart R. Clegg	4
4th	Ken Kamoche	3
5th	Anne S. Miner	2
	Arménio Rego	2
	Christine Moorman	2
	Claudia Simone Antonello	2
	Pedro Neves	2
	Stephen A. Leybourne	2

Source: prepared by the authors based on research data.

Table 1 highlights a ranking with five positions formed by authors who had more than one article in the analyzed sample. That is, of the 76 authors, 65 of them (85.6%) had a single publication and the other 11 (14.4%) are authors who comprise the ranking. Miguel Pina e Cunha is highlighted as the most prolific author in the sample, a member of Universidade Nova de Lisboa.

After this detailing of article authorships, the studies characterization is presented.

Table 2
Research Characterization

	Characteristic	Number of Articles	Percentage of Articles
Scope	Theoretical	26	53.10%
	Theoretical-Empirical	22	44.90%
Approach	Qualitative	41	83.70%
	Quantitative	5	10.20%
	Mixed	2	4.10%
Data Collection Technique	Not informed	19	38.80%
	Documents	17	34.70%
	Interviews	17	34.70%
	Observation	10	20.40%
	Questionnaire	4	8.20%
	Ethnography	2	4.10%
	Auto-ethnography	1	2.00%
Data Analysis Technique	Focal Group	1	2.00%
	Not informed	32	65.30%
	Content analysis	6	12.20%
	Correlation analysis	4	8.20%
	Regression analysis	4	8.20%
	Descriptive statistics	4	8.20%
	Document analysis	2	4.10%
	Cluster analysis	1	2.00%
	Descriptive analysis	1	2.00%
	Ethnographic analysis	1	2.00%
	Interpretative Phenomenological Analysis	1	2.00%
	Interpretative Analysis	1	2.00%
Systematic analysis	1	2.00%	

Source: prepared by the authors based on research data.

As per Table 2, it can be observed that the characteristics that stood out the most were: theoretical research; qualitative analysis; using documents and interviews for data collection; and content analysis as data

Article Citation	Main Contributions
Kamoche, Cunha and Cunha (2005)	Improvisation is understood as an organizational practice through which individuals and groups deal with complex time demands. Two dichotomies are discussed in it: clock time versus event time; and linear time versus cyclic time.
Cunha (2005)	Complex organizations require improvisation, seen the unpredictability of an uncertain and ambiguous environ. Imperfection aesthetics must be taken in consideration.
Cornelissen (2006)	Organizational improvisation as jazz is used as one of the examples for discussing disciplined imagination and the use of metaphors in building theories.
Leybourne (2006)	Through the analysis of financial services, the extent of improvisation is observed despite the “plan and execute” paradigm. Improvisation can help in dealing with changes that take place.
Chelminski (2007)	Based on Hofstede’s studies, improvisation is related to national culture. There is a suggestion that organizational improvisation is more likely to take place in cultures that avoid high uncertainty; collectivists; distant from power; and male.
Gallo and Gardiner (2007)	By studying the financial sector in the United Kingdom, it was observed a need of flexibility by project managers when the project in question is very close to the company’s strategical goals. That is, contradictory to what is believed, project managers seem to be willing to take risks, where the use of improvised behaviors is commonly accepted. In addition, it is highlighted that the way in which information is dealt with in a company affects its own degree of flexibility.
Müller (2007)	Improvisation is understood as a troubleshooting behavior aimed at the future, in which implementation begins without previous consideration of alternatives and its consequences and results are integrated in other processes. Through planning, improvisation gets a content, a deadline, a structure, and goal to be achieved.
Bergh and Lim (2008)	In corporate restructuring processes, improvisation is one of the ways that enables the company to learn, thus affecting its financial performance. In organizations with improvisation views, the use of spin-offs is more consistent.
Kamoche and Cunha (2008)	Organizational improvisation is an important knowledge source. Thus, “improvised knowledge” is presented. It comes from improvised actions, comprised of spontaneity, creativity, and intuition.
Vendelø (2009)	There are links between learning and improvisation despite scholars being resistant to research this topic.
Adrot and Garreau (2010)	Organizational improvisation is necessary for managing the high uncertainty of a crisis situation, being the managers’ responsibility of creating interactions favoring its occurrence. There are three types of fundamental interactions for such: discursive; translation; based on experience.
Cunha and Cunha (2010)	The most innovative instances of improvisation reproduce certain characteristics of daily experiences. Therefore, depending on the dynamics of variation, selection and retention, improvisation can be a source of stability or a source of change.
Bernstein and Barrett (2011)	Organizational leaders must maintain a sustainable balance between passionate impetus for novelty and for routine maintenance. Just like in jazz, it is necessary to develop dynamic abilities by means of improvisation.
Flach and Antonello (2011)	Improvisation and learning processes are phenomena that articulate between themselves.
Flach and Antonello (2011)	Starting from the Brazilian rhythm of Choro, improvisation in organizations is understood as a need of seeking new solutions without the benefits of pre-determined plans or actions. Therefore, faults are considered as part of the learning process, and it is necessary that leadership is distributed in order for improvisation to have a collective basis.
Flach (2012)	Improvisation enables organizations to tackle unforeseen issues, whose resolution has to be swift. Improvisation is linked to individual learning.
Shi and Prescott (2012)	A company’s rate of acquisition or alliance can vary. Acquisition is consistent with improvisation, as it involves a larger commitment of resources and risks, differently from alliances.
Zarankin and Wang (2013)	There are two backgrounds about the individual improvisation process: the cognitive style; and the procedural knowledge. Both backgrounds create intuitive judgments which, in turn, generate creative behaviors.
Cunha, Clegg, Rego and Neves (2014)	There are four types of organizational improvisation: ad-hoc; secret; provocative; managed. Each performs a different role and tackles different needs. Thus, improvisation is deemed as a complex process that assumes multiple forms and tackles several roles in different political settings. It is, therefore, a context-sensitive practice.
Cunha, Neves, Clegg and Rego (2014)	Improvisation is not only something that people do; it is a learned ability that organizations can manage. Moreover, improvisation is a polymorph process that takes many forms. Four of them are highlighted: semi-structured; episodic; subversive; resistive.
Flach (2014)	The constant use of organizational improvisation has benefits and disadvantages, depending on the organization, individual, area, and sector cultural setting in which it is used, as well as on the individuals’ perception and reaction towards it. Therefore, improvisation should not replace a plan or directive.
Hadida and Tarvainen (2014)	Organizational improvisation’s levels and grades are structured, enabling researches to deal with the richness and extent of such process.
Kirschbaum, Sakamoto and Vasconcelos (2014)	Starting from the relationship between organizational routines and improvisation, the <i>Repente</i> metaphor is introduced, a rhythm whose structures allow for improvisation and protection of each opponent’s space. On the other, at the same time, there is conflict and cooperation.
Nisula (2015)	Psychological empowerment and auto-efficacy related to improvisation are mechanisms through which

Article Citation	Main Contributions
	supervisor support affects individual improvisation.
Santos and Davel (2015)	Improvisation is understood as a culture ability, a mean of organizational survival. It is a resource related to flexibility and creativity.
Fifolt, Wakelee, Auffant, Carpenter and Hites (2016)	When facing unexpected events, leaders and other employees must have the creativity and flexibility to meet clients' needs, having an emergency planning as backup.
Giustiniano, Cunha and Clegg (2016)	Using the Costa Concordia shipwreck as an example, it is highlighted that improvisation is not always successful, having, therefore, a dark side. Organizations can end up being led to disaster in view of human decisions which are not expected by the system and that create vicious cycles.
Silveira (2016)	A <i>Samba</i> school is understood as an unstable undertaking in a constant process of (re)constitution. In other words, the possibilities of action are limited, in which the school setting, especially that of limited or insufficient resources, encourages us to remake the initially thought course for the narrative.
Belitski and Herzig (2017)	Design of the Jam Session Model for Group Creativity and Innovative Technology. This model is deemed relevant for entrepreneurship and creative communities for enabling innovation through improvisation.
Leybourne (2017)	Adaptation within a project is beneficial, as through improvisation, it helps in reducing risks and the uncertainty of interventions in it.
Offenhuber and Schechtner (2017)	Improvised governance is understood as a decision-making and implementation process between the players involved in public services provision and usage. In this sense, improvisation happens by necessity and not considering it could bring catastrophic consequences.
Arantes, Freitag and Santos (2018)	The setting of farmer-market informal entrepreneurs can be characterized as a practice community that enables them to learn on a daily basis. Thus, improvisation is seen as something positive.
Liu, Lv, Ying, Arndt and Wei (2018)	Improvisation improves innovation when companies have a decentralized formal structure. Sparse resources and minimization of irreversible investments also increase improvisation improvement.
Peters, Wieder and Sutton (2018)	Organizational improvisation decreases the importance of Business Intelligence functionality to improve organizational improvisation.
Cunha and Clegg (2019)	Improvisation contributes to organizational learning. However, one must not see it as an extraordinary action, but rather as regular and common.
Du, Wu, Liu and Hackney (2019)	Improvisation contributes to the development of Information Systems but can have negative outcomes if inadequately managed. A four-phase model is furnished, displaying a step-by-step of how to manage improvisation effectively.
Rosell, Haanpää and Janhunen (2019)	In the co-creation of value in tourism, three aspects are observed: human and non-human stakeholders; material resources; unexpected events. That is, it is a process that involves organizational improvisation and marketing actions.
Scaglione, Meyer and Mamédio (2019)	Improvisation in academic management is characterized by constant situations that challenge their managers to adapt, reorganize themselves during crises, and having a sense of urgency to deal with the unexpected, as the academic setting is dynamic and complex.

Figure 5. Main Contributions of Each Sampled Article

Source: prepared by the authors based on research data.

V. Conclusion

The goal of this research was to present a panorama of the national and international scientific production on the topic of Organizational Improvisation. The results found enable us to deem this goal as achieved. The 48 analyzed articles were published from 1998 to 2019, and the article average over the past eleven years is higher than that of the first eleven. Despite the number of articles in international journals being higher than Brazilian ones, two Brazilian journals were highlighted for the number of publications analyzed on this topic.

Moreover, Brazil is also highlighted on membership and number of authors alongside the United States. However, the most fruitful author is from Portugal. Regarding researches, it was observed that most of them is theoretical, dealing with metaphors, especially Jazz, and topics such as learning, creativity, and innovation. At last, a summary of the main article contributions was presented.

This study has its strong points and contributions. In the research carried out, no bibliometrics were found on the topic, therefore filling this methodological gap. In addition, choices regarding bases and analysis variables allowed us to have an overview on the international and national research about this topic, comparing them in some moments.

Further contribution is that the results found indicate a need of more empirical research on Organizational improvisation, in such a way as to broaden the debate on its application, advantages, disadvantages, and other aspects related to organizational life.

Among the limitations, it is worth mentioning that because of the database and variables chosen, no non-indexed journal articles were queried in these bases, in addition to not going further regarding the topics addressed in articles and which were related to improvisation. Thus, in order to overcome these limitations and

improve the results found herein, we suggest researching other databases to compare international and Brazilian production, and to carry out a thematic analysis of the articles' content.

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