GESTÃO ACADÊMICA EM TEMPO DE CRISE: INFLUÊNCIAS DA IMPROVISAÇÃO AO APRENDIZADO ORGANIZACIONAL

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ACADEMIC MANAGEMENT IN CRISIS'S TIME: INFLUENCES OF IMPROVISATION ON ORGANIZATIONAL LEARNING

1. INTRODUCTION

Universities are important organizations for the functioning of society (MEYER, 2014), and have particular characteristics. Researchers in the field of University education see universities as a political system (BALDRIDGE, 1971), organized anarchies (COHEN; MARCH, 1974), loosely articulated systems (WEICK, 1976), professional bureaucracies (MINTZBERG, 2015), complex (STACEY, 1996) and pluralists (JARZABKOWSKI; FENTON, 2006).

These characteristics are somehow connected, raising the level of complexity within this type of organization, reflecting a pluralistic context that affects organizational behavior and impacts the way these institutions respond to environmental challenges (MEYER; PASCUCI; MEYER, 2018).

Like other organizations in the world, universities were surprised by the COVID-19 pandemic. This event transformed higher education like no other event in recent memory. In a matter of days, universities closed their campuses, shifted classes from face-to-face to remote, changing every part of the educational experience.

The result of this was a crisis, which was installed in the higher education system, mainly at the beginning of the pandemic, as a result of the health restrictions imposed by governments, with the drop in enrollments and financial losses, demanding a rethink of academic offers, all of this, in the midst of to the threat of a persistent disease (CHRONICLE, 2020).

The pandemic context provoked a sense of urgency in Higher Education Institutions (HEIs), which needed to quickly seek ways to respond to the challenges posed by an environment full of uncertainties, for which existing planning proved to be powerless. The pandemic context is an obvious trigger for organizational change, which can set a precedent for improvisation (TABESH; VERA, 2020).

Improvisation arises when an incompatibility between the expected and actual reality can be perceived, this happens when the members of an organization face unexpected events for which they have no planned action, and which require quick responses (CUNHA; CUNHA; KAMOCHE, 1999).

In summary, the assumption that guided this study was: improvisation emerges in organizations when their managers face challenges for which existing plans and known management practices are powerless to face them. In this way, when responding to challenges, managers improvise and these improvisational practices generate organizational learning. Given the context presented, the following question arose: how did improvisational practices influence organizational learning in the perception of academic managers?

Aiming to solve the research question, the objective of this paper is to understand how improvisational practices carried out in response to uncertainties influence organizational learning in the perception of academic managers.

This is a qualitative research centered on a single case study, the result of a master's thesis and which was part of the Project "Improvisation in University Management: Practices and Organizational Performance", funded by the National Council for Scientific and Technological Development - CNPQ/ 2018, and it was supported by the University Scholarship Program of Santa Catarina – UNIEDU.

Data were collected through semi-structured interviews with 22 managers and documents from a University Center located in the north of Santa Catarina, with data analysis being carried out in a narrative way. Improvisational practices and their influence on organizational learning in the perception of academic managers were examined. Regarding the theoretical support, the study was based on concepts related to academic management (MEYER, 2014), organizational improvisation (KAMOCHE; CUNHA; CUNHA, 2002; SCAGLIONE; MEYER; MAMÉDIO, 2019; CIUCHTA; O'TOOLE; MINER, 2020) and organizational learning (ARGYRIS; SCHON; 1997; CUNHA et al., 2016).

Understanding how improvisation developed, triggering factors, practices in academic management and its results represent the essence of the contribution of this study, filling a recognized gap in the literature in this area (MONTUORI, 2003; SCAGLIONE; MEYER; MAMÉDIO, 2019). In addition, some authors such as Miner, Bassoff and Moorman (2001), Cunha, Kamoche and Cunha, (2002), Cunha and Clegg (2019) and Ciuchta, O'toole and Miner (2020), highlight the absence of studies that address improvisation as an organizational learning process. The present research also contributes in a theoretical and practical way to the management of Higher Education Institutions (HEIs), mainly with regard to the process of responding to the challenges imposed by the environment.

The analysis of the practices carried out by the managers brought contributions to the strategic management of the HEI, particularly in the academic area, the focus of the study. The results offer a new way of looking at the challenges imposed by the environment, and provide subsidies for strategic planning, especially in the planning of structures that allow managers to act quickly, thus contributing to the improvement of management practices and, consequently, improvement in institutional performance.

Finally, this work is divided into five parts: (i) introduction, with the presentation of the context, relevance of the subject, objective and results in a summary form; (ii) theoretical framework, focusing on university organizations and their characteristics, organizational improvisation and organizational learning; (iii) the work methodology; (iv) the results and finally; (v) the conclusions and summary.

2 THEORETICAL BACKGROUND
2.1 University organizations and their challenges

Universities are relevant organizations for the functioning of society, and face several challenges imposed by the complex context of which they are part (MEYER, 2014). For Balderston (1995) studies about universities and their impact on society show their particularities and their three roles as organization, institution and development agency.

In addition to being part of a society in constant transformation, universities are characterized as complex and have intrinsic characteristics that make them different from other traditional organizations, which makes their understanding and management difficult.

Several authors analyzed the characteristics and specificity of universities and considered them as a political system (BALDRIDGE, 1971), organized anarchy (COHEN; MARCH; OLSEN, 1972; COHEN; MARCH, 1974), loosely articulated systems (WEICK, 1976), professional bureaucracies (BALDRIDGE et al., 1977; MINTZBERG, 2003; 2015), complex (STACEY, 1996; MEYER, 2007) and pluralistic (JARZABKOWSKI; FENTON, 2006).

In addition to the challenges imposed by the complexity present in universities, the very nature of managerial work is challenging (MINTZBERG, 2010). This finding is even more evident in HEIs, where the nature of academic work is essentially intellectual (LORANGE, 2000), with qualitative and intangible results, difficult to control and measure (MEYER; MEYER, 2013).

University administrators deal with divergent interests (JARZABKOWSKI; FENTON, 2006), in a dynamic and unpredictable interaction between agents (STACEY, 1996), and these agents are "professionals" who act autonomously (BALDRIDGE et al. ., 1977) supported by a loosely articulated system (WEICK, 1976, 1982).

Another relevant factor that poses challenges to academic management is the lack of a university administration theory and administrative models and practices that meet its specificities. This causes universities to resort to business models and practices that are not consistent with the differentiated, dynamic and complex context of which they are part (WEICK, 1982; MEYER; MEYER, 2013; MEYER; LOPES, 2015).

In addition to dealing with internal forces, managers need to respond to external influences, such as consumer groups, government (MINTZBERG; 1990), political, economic, social, cultural and technological forces (MEYER, 2007). While managing the divergent expectations of students, teachers and the external community (MEYER; LOPES, 2015), they also need to respond to market forces and the demands of students and potential students (LORANGE, 2000).

The theoretical construct of this work agrees with the understanding of Mintzberg (2010, p.23), which identifies that "management is neither a science nor a profession: it is a practice learned mainly from experience and rooted in the context". An activity whose essence is eminently practical (MEYER, 2014).

To be involved in a practice is to be immersed in a context in which things, people and actions matter in specific ways (SANDBERG; TSOUKAS, 2011). In universities, as well as in other organizations, management has been practiced as a result of social, psychological and political interactions, involving processes, initiatives and routines, as a continuous flow of actions and results, in which interpretation and actions resulting from it (MEYER, 2014).

In short, when investigating an organizational practice, the researcher does not explore autonomous entities, but meaningful relational wholes, human beings and interrelated objects that appear in terms of familiar practices to deal with them (SANDBERG and TSOUKAS, 2011). This strategy implies that the researcher focuses on how professionals are generally involved in the relational whole in which they perform their tasks (SANDBERG; TSOUKAS, 2011), even when circumstances do not correspond to what was planned, requiring improvisation practices that will be further discussed in the next item.

2.2 Organizational improvisation

Organizational improvisation (IO) is a field that is concerned with the pressure on organizations to continuously react to the environment. This emerging paradigm is, in part, an attempt to deal with the complexity of a rapidly changing world and the need to look beyond traditional ways (KAMOCHE; CUNHA; CUNHA, 2002; CIUCHTA; O'TOOLE; MINER, 2020).

The day-to-day manager is not the planning manager advocated in the classic view of administration, in fact, daily actions are mostly a response to work pressures (MINTZBERG, 1990). In this sense, Cunha and Clegg (2019) state that improvisation needs to be seen as something mundane, infra-ordinary, trivial and not as an extraordinary event. Improvisers are people who, most of the time, are simply trying to accomplish something without a priori complex plan.

Improvisation happens when planning is inadequate or insufficient to deal with environmental changes (KAMOCHE; CUNHA; CUNHA, 2002). In this sense, organizations should consider improvisation as a potentially effective tool associated with planning, outlining the strategy and direction to follow (LEONE, 2010).

The concept of improvisation has spread in the discourse of organizational theory (MONTUORI, 2003). This does not mean that organizations should replace planning with improvisation, but rather, find ways to engage structure, forecasting and control through improvisation (CUNHA; CLEGG, 2019). Improvisation is organizational when practiced by members of an organization, and can occur at various levels, depending on whether it is performed by an actor (individual), between two or a few (interpersonal) or between many (organizational) (CUNHA; CUNHA; KAMOCHE, 1999; HADIDA; TARVAINEN, 2014).

The central definition of improvisation used in this study consists of *"conception of action as it develops, by an organization and/or its members, based on the material, cognitive, affective and social resources available"* (CUNHA; CUNHA; KAMOCHE, 1999 , p. 302).

The conception of the action as it develops presents an important element of improvisation, "in action" planning (CUNHA; CUNHA; KAMOCHE, 1999; CUNHA; CLEGG, 2019). Improvisation is deliberate, that is, the result of intentional efforts on behalf of the organization or its members; it is extemporaneous, and often part of an attempt to improve an emerging strategy and; occurs during the action, that is, the members of the organization develop responses to the problems or opportunities, based on the available resources (CUNHA; CUNHA; KAMOCHE, 1999; CUNHA; CLEGG, 2019). Improvisation is at the center of paradoxical relationships in organizations and involves apparently contradictory demands, such as "deliberation and spontaneity", "order and chaos", it is a combination of preparation and spontaneity, plans and deviations, structure and freedom (TABESH; VERA, 2020).

Cunha, Cunha and Kamoche (1999) point out several factors that contribute to making improvisation happen, they are: (i) minimal structure; (ii) experimental culture; (iii) sense of urgency and (iv) low routine memory. In organizations, minimal structures are the equivalent of non-negotiable, tacitly accepted rules that do not need to be constantly articulated (BARRETT, 1998), such as creeds, stories, myths, visions, slogans, mission statements, trademarks, etc. (WEICK, 1998). The freedom of improvisation is only possible against a defined basis of rules and roles (EISENBERG, 1990) that limit organizational actions.

Experimental culture results from a set of values and beliefs that promotes action and experimentation (as opposed to reflection and planning), as a way of understanding and dealing with reality (KAMOCHE; CUNHA; CUNHA, 2002; CIUCHTA; O'TOOLE ; MINER, 2020). It is essential to at least tolerate mistakes and understand that failures can occur while people strive to innovate (WEICK, 2002). The sense of urgency is essential, since the occurrence of an unexpected and unplanned event is not enough for improvisation to take place, it is necessary to respond to this event through quick actions (SCAGLIONE; MEYER; MAMÉDIO, 2019).

Finally, routine memory corresponds to the set of routines that the organization has to address unexpected tasks or challenges. An organization with an adequate routine memory will probably resort to already established routines to respond to unexpected situations, thus, improvisation will happen less frequently (KAMOCHE; CUNHA; CUNHA, 2002).

According to Cunha, Cunha and Kamoche (1999), organizational learning, based on improvisation, can generate positive (flexibility; learning; motivation and affective results) and negative (biased learning; opportunity traps; amplification of emerging actions; excessive dependency of improvisation and; increased anxiety) results.

At the organizational level, improvisation can impact performance, causing company growth, successful entry into new markets or innovation, as well as influencing organizational learning, leading to organizational change. At the group or individual level, it can impact individuals' emotional or behavioral states, and increase feelings of confidence and skills to deal with unique situations, promoting the development of an entrepreneurial mindset (CIUCHTA; O'TOOLE; MINER, 2020). Therefore, improvisation activities, however modest they may seem, when they occur can have a transformational effect on the organization (CUNHA; CUNHA; KAMOCHE, 1999).

Authors such as Miner, Bassoff and Moorman (2001), Cunha, Kamoche and Cunha, (2002), Cunha and Clegg (2019) and Ciuchta, O'toole and Miner (2020), highlight the absence of studies that address improvisation as a organizational learning process, and argue that research should be carried out to understand how improvisation can contribute to organizational learning. In view of the above, we now examine the learning generated from the improvisations used in response to the COVID-19 pandemic, therefore, the section that follows will address concepts related to organizational learning from improvisational practices.

2.2.1 Types of improvisation

In order to organize the results around their implications for learning, this work used the typology on improvisation proposed by Cunha et al. (2016) which is segregated into four types: ad-hoc (informal, but cultivated as desirable responses to organizational problems); subversive (informal, positive and tolerated if conducted for the benefit of the organization); resistive (informal, unwanted); semi-structured (formal, desired). Table 02 presents the different forms of improvisation proposed by the authors.

Resistive improvisations arise in organizations with strong regulation and bureaucracy, where they are not accepted. Individuals secretly improvise to protect themselves from the organization's gaze. These improvisations refer to ideas that arise in unplanned ways, allowing agents to take advantage of unforeseen opportunities, are the result of the initiative of

individuals or small teams and a direct response to the restrictions introduced by the structure of the organization (CUNHA et al., 2016).

Subversive improvisations attempt to challenge organization with the explicit purpose of unbalancing what is customarily structured and taken for granted. Subversive initiatives often start under the organization's radar, in some cases becoming visible as their authors gain confidence in both the merit of their proposal and the readiness of top management to view them favorably. (CUNHA et al., 2016).

Ad-hoc improvisations can be defined as creative and spontaneous behavior, responding to some unexpected event or creating ad-hoc responses in specific circumstances. The difference in this type of improvisation is that they are usually started when an event occurs and end when the event expires, leaving no learning (CUNHA et al., 2016).

Semi-structured improvisations refer to the continuous and distributed alignment of emerging activities with organizational objectives, through direct guidelines that offer a combination of guidance and permission, and take place in organizations that create processes to support adaptations (CUNHA et al., 2016).

2.3 Organizational Learning

Organizational learning has received increasing attention from scholars of organizations (ARGYRIS; SCHÖN, 1997; GHERARDI, 2001; ANTONACOPOULOU, CHIVA, 2007; ANTONACOPOULO; SHEAFFER, 2014). This is an important concept considering that learning tends to generate new lessons and impact organizational competitive advantage (ANTONACOPOULO; SHEAFFER, 2014).

Antonacopoulou and Chiva (2007, p.290) conceptualize organizational learning as "the flow of learning possibilities derived from the multiplicity of connections with which community practitioners engage as they constantly reconfigure their (learning) practices".

Argyris and Schon (1997) propose that learning takes place in two ways: "single-loop" or "double-loop". In "single-loop" learning, the members of the organization respond to changes in the organization's environment, detecting errors that are corrected, in order to maintain the central characteristics of the organizational theory in use. They are learning episodes that function to preserve a certain type of constancy (ARGYRIS; SCHÖN; 1997). "Double-loop" learning occurs when the error is detected, corrected and the norms, policies and implicit objectives of an organization are modified. (ARGYRIS; SCHÖN; 1997).

Learning resides in social relationships, and knowledge is part of becoming a source in a community of practice (GHERARDI, 2001). Knowledge is not what people have in their heads, but what they do working together and what they create through negotiated meaning. (CUNHA et al., 2016).

2.3.1 Learning and improvisation

The need for organizational learning is not an occasional and sporadic phenomenon, but something continuous and endemic in our society. (ARGYRIS; SCHÖN, 1997). The learning generated from improvisation can be an alternative that provides more appropriate results for this volatile context (LEYBOURNE; KENNEDY, 2015; CUNHA; CLEGG, 2019).

In terms of managerial learning, developing awareness of the different types and roles of improvisation, relating it to processes of change and action, studying how they work and/or worked to understand and replicate, are promising opportunities for managing organizations (CUNHA et al. , 2016). The idea of clearly coordinated learning is evident, but the result resulting from improvisation is also a source of learning (CUNHA; CLEGG, 2019).

Cunha et al. (2016) define improvised learning as the process of improving an organization's repertoire of actions, based on responses to unexpected events. Still according to the same authors, improvisation is better understood as a process that presents itself in different ways and, consequently, manifests different forms of learning, as highlighted in Table 01.

Table 01 – Types of improvisation and learning

Type	Observation	Contribution to learning
Resistive	It is specific for those who articulate improvisations and who do not intend to pass them on to the organization. People may want to hide their improvisations in order to protect specific forms of know-how or for identity reasons.	Can contribute to knowledge about learning policies
Subversive	It means that individuals and teams, in practice, subvert the organization's formal schemes, improvisers can challenge dominant habits by developing informal experiments with a strong improvisational component.	These experiments can eventually be adopted by organizations, revitalizing and supporting the unlearning of obsolete practices;
Ad-hoc	Learning can be approached from the perspective of how individuals deal with unexpected problems and learn based on events, in this case, in real time.	How people perceive and respond to the unexpected can help understand the practice of real-time learning and, if the practice is forgotten after the fact, unlearning;
semi-structured	Learning can be built into the organization's rules as part of strategic learning processes.	The study of improvisation as normal practice can facilitate the study of learning as continual adaptation from the bottom up.

Source: Adapted from Cunha et al. (2016)

The authors, Cunha and Clegg (2019) argue that improvisation is an example of a paradoxical practice that belongs to the domain of the infra-ordinary and not something extraordinary as has been usually assumed in existing research, as processes or innovations that radically change practices in organizations. For many, this sometimes involves taking action to fix some process, while in other cases it involves breaking the routine, that is, reinforcing or abandoning the status quo.

3 METHODOLOGY

The methodology of this work is structured in 3 parts: (i) specification of the problem and research questions; (ii) definition of analytical categories; (iii) research design and data collection and analysis procedures.

The relationship between improvisation and organizational learning are intertwined in important ways, as already highlighted in this article, which allows the formulation of three questions, also considered as the intermediate objectives of this work: 1) "What were the main challenges faced by the HEI as a result of of COVID-19?"; 2) "What were the main types of improvisations practiced by academic managers in response to the challenges posed by the pandemic?"; and 3) "What was the learning generated by the improvisational practices of academic managers when dealing with COVID-19?".

The analysis categories, shown in Table 02, were established based on the literature in the area and in accordance with the research objectives. The constitutive definition is the conceptual definition used in the study, and emerged from the theoretical basis studied, while

the operational definition demonstrates how the constitutive definition was operationalized, that is, a way to make the concepts subject to observation (GIL, 2017).

Table 02 - Definition of analytical categories

Obj	Category/authors	Constitutive and Operational Definition
OI1	**Challenges in managerial practices** (MINTZBERG, 2010) (SANDBERG; TSOUKAS, 2011)	**C.D.** In universities, as well as in other organizations, management has been practiced as a result of social, psychological and political interactions, involving processes, initiatives and routines, as a continuous flow of actions and results, in which interpretation and actions resulting from it (MEYER, 2014) **O.D.** Challenges arising from the pandemic and that challenged managers, especially in academic aspects, the core of HEIs, will be considered.
OI2	**Types of Improvisation** (CUNHA et.al. 2016) (CUNHA; CLEGG; NEVES, 2014)	**C.D. Ad-hoc improvisation:** creative and spontaneous behavior, responding to some unexpected event or creating ad hoc responses in specific circumstances (CUNHA et al., 2016). **O.D. Ad-hoc improvisation:** the individual(s) decide to improvise in order to solve a problem and these answers are not needed in the future
		C.D. Resistive improvisation: arises as a result of the initiative of individuals or small teams and is a direct response to the restrictions introduced by the structure of the organization (CUNHA et al., 2016). **O.D. Resistive improvisation:** arises as a direct response to constraints introduced by the structure of the organization
		C.D. Subversive improvisation: attempts to challenge the organization with the explicit purpose of unbalancing what is usually structured and taken for granted or certain (CUNHA et al., 2016). **O.D. Subversive improvisation:** the individual(s) decide to improvise innovative solutions with the desire to disrupt the status quo.
		C.D. Semi-structured improvisation: refer to the continuous and distributed alignment of emerging activities with organizational objectives, through direct guidelines that offer a combination of guidance and permission (CUNHA et al., 2016). **O.D. Semi-structured improvisation:** when the organization favors and encourages people to improvise and assume that there are several answers to specific problems in each sector.
OI3	**Learning** (ARGYRIS; SCHÖN; 1997) (GHERARDI, 2001) (CUNHA et al.,2016)	**C.D. "Single-loop" learning:** the members of the organization respond to changes in the organization's environment, detecting errors that are corrected, in order to maintain the central characteristics of the organizational theory in use. (ARGYRIS; SCHÖN; 1997). **O.D.** *Single-loop:* learning in which there was improvement in practices or work routine, with new actions, behaviors or initiatives and not in the organizational structure.
		C.D. "Double-loop" learning: occurs when the error is detected and corrected in a way that involves the modification of norms, policies and implicit objectives of an organization (ARGYRIS; SCHÖN; 1997). **O.D.** *Double-loop:* learning in which there was change and innovation in work practices or routines.

Source: authors, 2023

The path by which we sought to achieve the objectives was composed of a qualitative research centered on a single case study (YIN, 2010), with data collected through different sources (interviews, observation and document analysis), this combination to analyze a The same phenomenon allowed triangulation (FLICK, 2009) and construct validation (YIN, 2010).

For this study, a university center was selected (de-characterized and named CRETA), because it is a revealing case, which occurs when the researcher has access to a situation or phenomenon hitherto inaccessible to scientific investigation (YIN, 2001), and also considering its representativeness for the region. CRETA offers university courses, postgraduate courses,

open courses and Distance Education and operates in five cities in the state (two campuses, one in Betha city and another in Alpha city and three distance education centers). The focus of the study was the "decision makers" university managers (called Rectors and Pro-Rectors) and academic managers (treated as course coordinators, and responsible for management) working with face-to-face graduation, the modality most affected during the pandemic. .

The semi-structured (open) interviews (CRESWELL, 2012) were carried out with 22 managers (05 with university managers; 16 with academic managers; and 01 pedagogical advisor who was in charge of important processes throughout the study period), and took place in a online, from November 2021 to January 2022 and respondents were invited to share their experiences during the COVID-19 pandemic period, that is, from March 2020 to December 2021. Respondents received and signed with the Free and Informed Consent Term - TCLE (Appendix E) in advance, so that they were aware of the Risks and Benefits of the Research. The interviews generated a total of 25 hours of recording, totaling 191 pages of transcription.

The **documentary source included institutional documents** (Institutional Development Project (PDI), Course Pedagogical Project (PPC), IES General Regulations and Reports that prove activities carried out during this period, such as the Academic Performance Report. In addition, a of the researchers worked as a collaborator at the HEI during most of the analyzed period, which made it possible to be at the locus of the study, in contact with aspects of life, values, customs and social structure of the organization. The **non-participant observation** comprised the pandemic period , in which the researcher accompanied the meetings of the upper management with the course coordinators, as well as the meetings between the coordinators and their collegiate bodies and Structuring Teaching Nuclei (NDEs).

Qualitative data analysis requires understanding how to make sense of texts and images so that answers to research questions can be formed (CRESWELL, 2012). Thus, for the analysis of the collected data, the technique of narrative analysis was used, "everything is a narrative or at least can be treated as such" (CZARNIAWSKA, 2004, p.17). In this sense, the narrative is understood as a spoken or written text that reports an event, action or series of events and actions, chronologically connected (CZARNIAWSKA, 2004).

The interviews were transcribed in full and the analysis process was divided into two stages: the first descriptive and the second, interpretive (MURRAY, 2020). In the first stage, a complete and attentive reading of all transcripts was carried out, highlighting key elements, such as the beginning, middle and end and the connections between the interviewees' narratives. The second stage consisted of interpreting the narratives in order to connect the narratives with the literature, through the analytical categories described in Table 02. Table 3 presents a summary of the methodology used in this article.

Table 3 - Summary of the research design

Research design and justifications

Search type
 (Qualitative research)
     - It helps to understand how improvisation is formed, and how it works as a learning process (LEONE, 2010); It is
     - It is a holistic way of studying social phenomena, the focus is on the perceptions and experiences of those involved, in order to understand how they understand their own reality (CRESWELL, 2012).

Case study method   **(Case study)**   - It is a method widely used in the field of administration, and serves as a basis for evidence that contributes to the advancement of knowledge and construction of theories (EISENHARDT, 1989);   - The case study provides direct contact with the experiences, people and practices related to a certain phenomenon, or aspect of the real life of organizations (CRESWELL (2010);   - This method is identified with qualitative methodology and refers to a deeper survey of a given case (LAKATOS; MARCONI, 2008);   **(Single case)**   - It is a research strategy used in organizational and management studies and the study of a revealing case is justified when the researcher has the opportunity to analyze a phenomenon that is difficult to be investigated scientifically and that is not accessible to most researchers (YIN, 2001) .
Data collection procedure   **(Interviews)**   - They are important sources of data for case studies, allowing the researcher to ask respondents about facts and events and question them about their opinion, experience or interpretation of certain events (YIN, 2010);   - Open-ended questions allow participants to better express their experiences, without the limitations of any researcher's perspectives or previous research findings (CRESWELL, 2012);   **(Institutional documents)**   - They are a valuable source of information in qualitative research (CRESWELL, 2012);   - They provide specific details to corroborate information obtained from other sources (YIN, 2010).   **(Observation)**   - It is possible to analyze behaviors and environmental conditions of the studied phenomenon (YIN, 2010).   - A non-participant observer is one who visits the site and takes notes without becoming involved in the participants' activities, this role requires less access than the participant role, and individuals at a research site may feel more comfortable with it (CRESWELL , 2012).
Data analysis procedure   **(Narrative analysis)**   - Because data sources can be treated with narratives (CZARNIAWSKA, 2004);   - It makes it possible, through understanding how to make sense of texts and images, to formulate answers to research questions (CRESWELL, 2012); It is   - It can be divided into a descriptive part (highlighting key elements) and an interpretative part (related to the analytical categories of the work), which helps in the formation of responses (MURRAY, 2020).

Source: authors, 2023

Every "ideal" narrative begins with a status quo that is disturbed by some force, this new imbalanced status tends to seek a new equilibrium, which may be similar to the first, but never the same (CZARNIAWSKA, 2004). Thus, the construction of the narratives presented here had as a starting point the imbalance caused by the COVID-19 pandemic, which made managers resort to improvisation. The results of the work will be presented in the next section.

4 RESULTS ANALYSIS
4.1 Main challenges faced by HEIs

Based on the theoretical contribution and data collected and analyzed, the main challenges that impacted CRETA during the pandemic were identified. The challenges are presented in Table 04 below and are organized according to their impact on the HEI and on academic management.

Table 04 - Challenges faced by CRETA

Challenge	Explanation
Emergency naturel	The emergency character was highlighted as one of the main challenges posed by the pandemic. It was observed, from the reports presented, that all interviewed managers, at some point, showed concern with rapid changes. **Evidence:** "the pandemic forced it, there was no option, you couldn't leave it for later" (E21)
Constant changes and adjustments in planning	The constant changes and adjustments in planning have generated new challenges for management, both at the institutional and course levels. **Evidence**: "we have to change routes every week, you are not going to change routes and then convince everyone, so this difficulty of changing routes frequently and not having time to sit down and discuss with people, explaining ends up generating instability" (E01)
Resistance to change by teachers	The instability arising from the constant "route changes" generated resistance on the part of the professors, and an effort to convince the managers that with each new decision they needed to convince their collegiate. **Evidence**: "[...] the resistance, that any change you implement, the first perception is "it won't work" [...] but even convincing the teachers was a very complicated thing indeed" (E11)
Academic result follow-up	At universities, academic results tend to be of a qualitative and intangible nature, difficult to monitor and measure (MEYER, 2013). During the pandemic, this difficulty was accentuated as the migration from face-to-face to remote teaching brought new challenges. Students needed to adapt to a new way of teaching, teachers had to learn new methodologies, and managers had to deal with the challenge of managing this process and monitoring academic results. **Evidence:** "so that's what we didn't have control over, we know we taught, but we don't know if the guy learned" (E17) "this was also a challenge, trying to measure it, if the students were seeing that they were learning with the methodology that the teacher was using [...]" (E18)
Regulatory pressure	There was strong regulatory pressure during the pandemic, there were daily ordinances being issued by different regulatory bodies, in different spheres (municipal, state and governmental), and this influenced the functioning of CRETA and consequently the performance of managers. **Evidence**: "even the legislation at the beginning was confusing, because of the model, and we had a difference in legislation between national, state and municipal, some things were suitable for the Alpha unit, not applicable for Betha [...]" "you have a highly regulated system, you can't do anything because you have the MEC behind you" (E14)
Technological difficulties	As in many organizations, technological difficulties permeated management during the pandemic period, all courses, to a greater or lesser extent, faced difficulties, with students or professors. With regard to teachers, the difficulties involved the little affinity that some courses had with technology, or the lack of use of technology-mediated methodologies. With regard to students, it was identified that many were not prepared to attend classes remotely, as they did not have the minimum necessary technology, such as a computer or internet. **Evidence:** "one of the points that we had to do a lot, practically individually, teacher by teacher, we had some meetings, mini training, in addition to those that were developed institutionally for specific issues of the course" (E17)
Student retention	Already at the beginning of the pandemic, in April 2020, university and academic managers noticed a significant increase in school dropouts, this concern denoted special attention from managers throughout the analyzed period.
Truancy	**Evidence:** "every week, if I am not mistaken on Tuesday, we received the evasion reports
Attracting incoming students	While managing the challenge of retaining students in their courses, managers had to deal with the challenge of attracting new students, due to the uncertainties arising from the context of the pandemic, there was a decline in enrollment in face-to-face courses, **Evidence:** According to Higher Education Census data, released by INEP, in 2020, on-site courses at private colleges had a 15.6% drop in the number of entrants (ABMES, 2020).
Access restriction to internship field and practical activities	Mainly in the health area, due to decrees, it was not possible for students to access health units to carry out their internships. On the other hand, MEC recommended that practical activities continue in person. In this way, in health courses, these activities were suspended in the first half of 2020, and managers created strategies to deal with the situation and maintain the progress of the course without prejudice to students. **Evidence: "**because I already had that orientation that practice is practice and it cannot be online" (E05)

Lack of access to physical labs and the "traditional" classroom	The courses at the Escola Politécnica had difficulties in dealing with the lack of access to physical laboratories, and the "traditional" classroom with a whiteboard, which hindered the development of some core disciplines, and this fact demanded special attention from managers who needed to seek resources that CRETA did not have to deal with this challenge. **Evidence:** "one of the tools that teachers used most was the blackboard, because you have to do a lot of math, imagine having to do a calculus course with slides, there's no way" (E18)

Source: authors, 2023

As mentioned by Meyer (2014), the inherent characteristics of the university context make its management complex and differentiated. It was possible to observe from the managers' reports that some intrinsic characteristics of universities were exacerbated by the pandemic, generating even more challenges for CRETA managers, such as bureaucracy and divergence of interests.

The main challenges faced by CRETA managers as a result of COVID-19 have been highlighted so far, with the purpose of answering the other questions that guided this research, situations in which improvised management practices were necessary to deal with the challenges imposed by the pandemic, and the learning resulting from these practices.

4.2 Types of improvisations practiced by academic managers

After identifying the main challenges that permeated the academic management process during the pandemic, we sought to respond to the second proposed objective, *which consisted of examining the manifestations of improvisations in the practices of academic managers in response to the challenges posed by the pandemic.*

When analyzing the reports, it was possible to observe that all managers, at some point, resorted to improvisation to deal with the challenges posed by the pandemic, as highlighted by a course coordinator "who does not say that they improvised at least half the time, is lying (laughs), there is no way" (E04).

Some improvisations consisted of minor adjustments, as in Case 05, in which the academic manager assigned a professor to assist another professor with difficulties in using technologies during the period of remote classes.

There were situations in which improvisation occurred as a deviation from the central strategy, as observed in Case 08, in which the manager deviated from the proposed strategies and implemented Google Classroom in his course, even so, he instructed his teachers to continue filling out the VLE (Virtual Learning Environment), in order to minimally meet the institutional strategy.

Improvisation manifested itself in different ways, from small actions in everyday life, as in the example cited by a course coordinator, in which he deviated from standard procedures and resorted to the manager of the financial sector to request a bank slip and solve the problem of a student. As well as in large institutional movements, such as the creation and performance of the Contingency Committee and in the planning and implementation of remote teaching.

Improvisation was a key tool to quickly respond to the challenges posed by the pandemic. When faced with emerging situations, and in the absence of prior planning, managers resorted to improvisation, as observed in Case 02, in which managers needed to plan the migration from face-to-face to remote teaching in a single day, as mentioned by Interviewee 22 "we made a decision "that day" (emphasis on the sentence), in a matter of minutes [...] so that March 18th, from 8:00 am to 6:00 pm, we took all these decisions, the synchronous class format, the platform of use for the transmission of classes, and the repository of documents" (E22).

Even in the face of this planning, there was a need to resort to improvisation to deal with the problems that arose and that had not been mapped in the "Contingency Plan", as highlighted by Interviewee 22 ""[...] this ability to improvise, it it was so big, because the problems were

many, it was a lot, because they were questions that we didn't know how to answer [...] they were things that we hadn't discussed initially" (E22) .

As mentioned by authors who study improvisation (WEICK, 1998; CUNHA; CUNHA; KAMOCHE, 1999; KAMOCHE; CUNHA; CUNHA, 2002; SCAGLIONE; MEYER; MAMÉDIO, 2019), some conditions are necessary for improvisation to take place, in CRETA, it was observed that the sense of urgency evident during the pandemic, the minimal structure and, at times, the lack of standard routines, were essential conditions for improvisation to take place.

This could be observed in the practice of Manager 05 (Case 04), who, faced with the difficulty of accessing his students' internship field, and without a standard routine to deal with the situation, resorted to improvisation and anticipated theoretical disciplines, so that they would not delay in completing the course.

It was verified that, in general, the improvisational practices developed, constituted in spontaneous reactions, motivated by the emerging context, and by the urgency of answers, in which managers used the available resources (bricolage). As for example, in the planning and implementation of remote teaching, in which the practices already carried out by the HEI, such as courses and disciplines in the distance modality and the VLE, were the starting point for the implemented teaching model.

It is important to highlight that at CRETA the academic managers also act as professors in their respective courses, therefore, during the interviews, several situations of improvisation were identified within the classroom, however, only examples that involved the academic management, object of this study.

4.3 Learning generated from improvisational practices

After identifying the main challenges that permeated the academic management process during the pandemic, and examining the main manifestations of improvisation in the practices of managers, we sought to respond to the third proposed objective, which consisted of *analyzing the learning generated by the improvisational practices of academic managers when dealing with COVID-19?*

It was evident from the data analysis that ad-hoc improvisations (case 04, 05, 07 and 08) were used by managers as spontaneous responses to unexpected situations that somehow impacted their course. These improvisational practices brought benefits, however, they did not generate learning. This finding corroborates the propositions of Cunha et al. (2016), that ad-hoc improvisations start when an event occurs and end when the event expires, leaving no learning.

In Case 05, for example, the manager resorted to improvisation, made the necessary adjustments so that one teacher could be the technological support of another during remote classes, however, after returning to face-to-face classes, this practice was extinguished in the course. Likewise in Case 04, in which the manager resorted to improvisation, adapted the disciplines of graduating students, so that there was no delay in completing the course, however, this practice was used only in a specific semester.

It is important to highlight that the improvisations that generated new practices, policies, norms or institutional guidelines (ARGYRIS; SCHÖN, 1997) were made possible through institutional management initiatives, by providing conditions for improvisations to take place. These improvisations were characterized as semi-structures (case 01, 02, 03 and 09), in which the organization provides a structure that allows freedom and adaptations, aligned with the organizational objectives, that is, a combination of guidance and permission (minimum structure) (CUNHA et al., 2016). This finding corroborates Cunha and Clegg (2019) who highlight the importance of organizational support in the improvisation process, creating guidelines that allow for flexibility and adaptation.

In general, from the cases identified, it was possible to verify that improvisations were practiced, helped in the process of responding to the challenges posed by the pandemic and generated organizational learning. Some improvisations solved problems and did not result in learning, as highlighted in Cases 01, 04, 05 and 08. On the other hand, some improvisations generated new practices, routines or processes that will be maintained by CRETA, even after the pandemic period, as highlighted in Cases 02, 03, 06, 07 and 09.

At CRETA, learning was group-based and resulted from the experiences lived during the pandemic period, it was built from social relationships, and the multiple connections between the individuals involved.

Table 05 summarizes the main findings of the study. Improvisations were classified as ad-hoc, resistive, subversive and semi-structured, according to the typology of Cunha et.al. (2016). Its manifestation was classified as individual (one actor), interpersonal (two actors) and organizational (among several actors). On the other hand, learning was analyzed and characterized according to the propositions of Argyris and Schön (1997), single-loop, when there is improvement in practices, but not in the central characteristics of the organization, and double-loop, when learning results in new practices, policies, organizational norms and goals.

Table 05 - Evidence of the relationships identified between Improvisation and learning

Identified cases	Type of improvisation/ Challenge faced/ form of manifestation	New practices / Type of learning	Comments
01- Creation and performance of the Contingency Committee	- Half structured - External bureaucracy - Interpersonal	There was no learning / Single-loop	The Committee's work is geared only to the pandemic period, thus it is an improvisation that brought benefits, but did not generate learning.
02- Planning and implementation of remote teaching (undergraduate)	- Half structured - External bureaucracy - Organizational	New technological tools began to be used in the teaching and learning process; Online student counseling; Guidance of TCC and internship remotely; Administrative processes rethought to serve students (protocol system; scheduled service at the Call Center; and automatic request for statements via the student portal)/ Double-loop	The learning arising from improvised actions related to the planning and implementation of remote teaching could be imminently perceived, the improvisations carried out during this period were explored and brought benefits to the HEI.
03- Planning and implementation of remote teaching (postgraduate)	- Half structured - External bureaucracy - Interpersonal	New graduate model; Expansion of geographical coverage with students throughout Brazil; Creation of the Dean of Research and Graduate Studies / Double-loop	Improvised actions during this process resulted in a new graduate model, an opportunity that was not being visualized before the pandemic.
04- Change in subjects - Course N (Alpha unit)	- Ad hoc -Closure of the internship field and practical activities - Individual	No learning /Single-loop	Practice carried out only in a specific semester to attend to this particular case, it is an improvisation that brought benefits, but did not generate learning.
05 - Support teacher Course T (Alpha unit)	- Ad hoc -Technological difficulties - Individual	There was no learning / Single-loop	
06- Creation and performance of the Retention Committee	- Half structured -Dropout of students - Interpersonal	New process for managing and controlling school dropouts. / Double-loop	This process becomes part of the HEI routine, even after the pandemic.
07- New practices via computer system Course M (Betha unit)	- Ad hoc -Methodological difficulties - Interpersonal	Emulator-mediated classes / Double-loop	New pedagogical practices mediated via the computer system (software and emulators/simulators) will be maintained in the M course.
08- Q Course Strategy Deviation (Alpha unit)	- Ad-hoc -Technological difficulties - Individual	There was no learning / Single-loop	This action to deviate from the model proposed by the IES was used until the end of 2020, the following year the IES began to use Microsoft tools, which met the specifics of the course
09- Monitoring academic performance	- Half structured -Monitoring of academic performance - Individual	New routine for monitoring academic performance / Double-loop	This process becomes part of the HEI routine, even after the pandemic.

Source: Authors, 2023

According to Cunha, Cunha and Kamoche (1999), improvisation activities, however modest they may seem, when they occur can have a transformational effect on the organization. This corroborates with the examples of improvised practices observed in Case 03. A new online postgraduate model was implemented, which resulted in the expansion of the geographic coverage of students, growth in the number of students and the creation of a Pro-Rectory for Research and Postgraduate studies. This fact, as highlighted by the university manager (E20), "generated a new opportunity that was not being visualized, the online and synchronous was not part of our institutional planning". That is, learning that modified norms, policies and explicit objectives of the HEI .

Organizational learning is a set of what people think or do, that is, a practice, in which context, things, people and actions matter in specific ways (SANDBERG; TSOUKAS, 2011). As mentioned by the authors, Sandberg and Tsoukas (2011), in CRETE, learning was group-based and resulted from experiences during the pandemic period. Learning was constructed based on social relationships and the multiple connections between the individuals involved (university and academic managers, professors, students and collaborators).

When analyzing the managers' reports, it was possible to observe that improvised actions were carried out, and from them there was learning. However, the managers did not build this understanding, and this is an important finding, there was improvisation in the practices of the managers, these actions generated organizational learning, and they did not realize it. In part, this is explained by the emerging context of the pandemic, which made managers act quickly and often, without time to reflect on the actions taken.

In the perception of managers, the learning obtained during the pandemic was subjective, which involved knowledge inherent to the subject, and not concrete actions, such as those identified in the analysis.

For the managers, this moment made them reflect on their performance, and showed that "it is always necessary to be prepared for changes" (Manager 18), "act quickly and, if necessary, fix it quickly" (Manager 21), as well as "demonstrated the ability to adaptation and resilience" (Manager 04). For some managers, "the pandemic taught that it is possible to manage, outside of traditional standards" (Manager 17) and that "distance management is possible and efficient" (Manager 02, 08 and 17).

4.4 Conceptual Framework

The assumption that guided the study was: *improvisation emerges in organizations when their managers face challenges for which existing plans and known management practices are powerless to face them. In this way, when responding to challenges, managers improvise, and these practices generate organizational learning.*

From the analysis of the data, and the cases of improvisation identified, it was evident that the pandemic imposed challenges (internal and external) on managers, for which the existing plans were not enough. As a way of responding to these new challenges, managers resorted to improvisational practices, and from these actions, there was organizational learning. In this sense, the Conceptual Framework was outlined below.

Figure 01 – Conceptual Framework: improvisation and learning in academic management
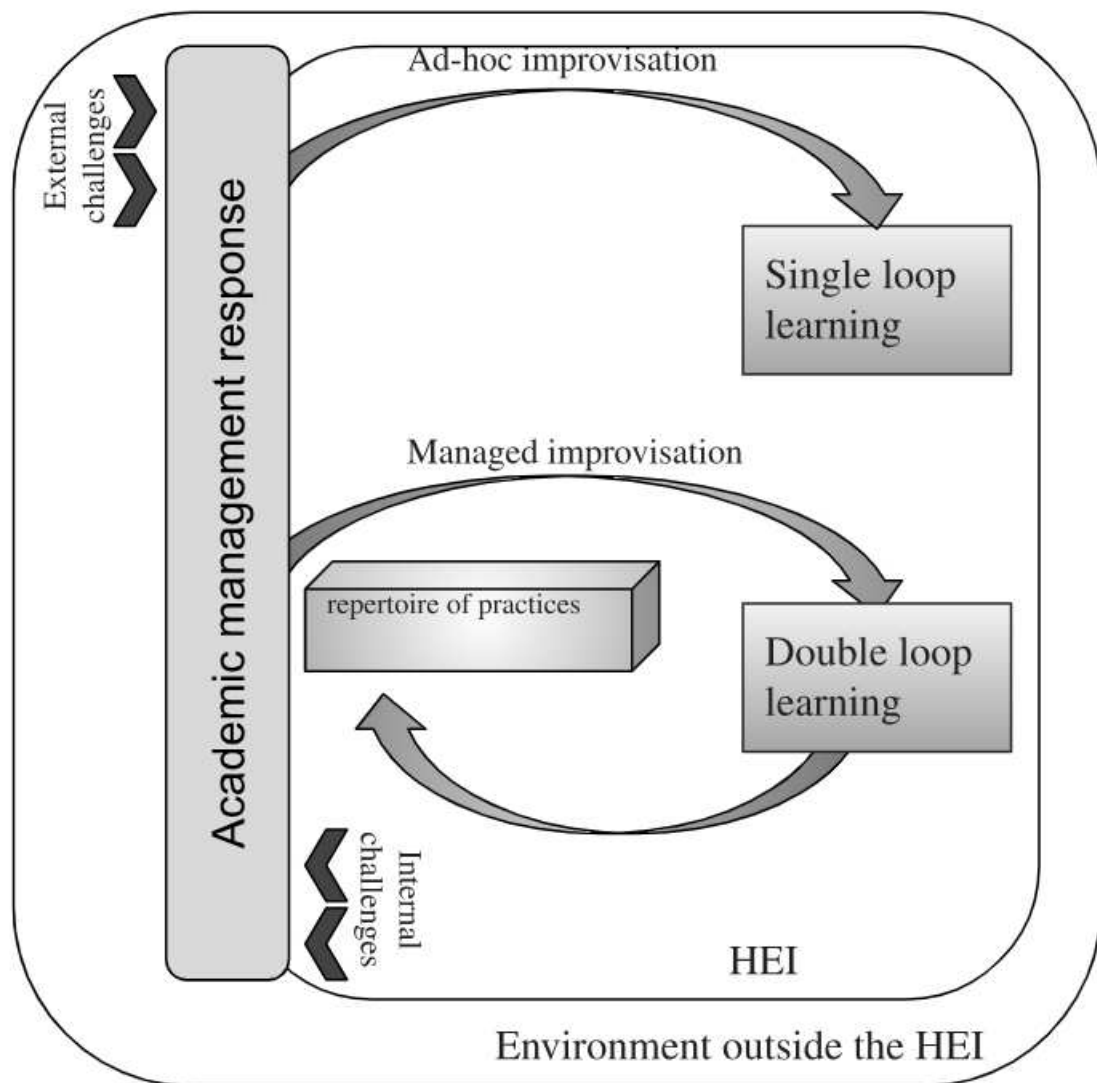
Improvisations classified as ad-hoc were used by managers as spontaneous responses to unexpected situations, necessary to deal with specific events and not incorporated into organizational routines, that is, single loop learning, when there is improvement in practices, but not in the central characteristics of the organization.

Improvisations characterized as semi-structures resulted in double-loop learning, that is, new practices, policies, norms and organizational objectives. These improvisations were made possible by institutional management, and this reinforced the HEI's role in the improvisation process, providing structures that allow freedom and adaptations, in line with organizational objectives. In general, from the identified cases, it was possible to verify that improvisations were practiced, influenced the process of responses to the challenges posed by the pandemic and generated organizational learning.

5 CONCLUSIONS AND SUMMARY

This work aimed to understand how improvisational practices performed in response to uncertainties influence organizational learning in the perception of academic managers. For this, a qualitative approach centered on a single case study was used, in which data were collected through semi-structured interviews, institutional documents and observation, and data

analysis was carried out through narrative analysis under the theoretical perspective of academic management, organizational improvisation and organizational learning.

Among the main results, the analysis revealed that academic managers used improvisational practices as a way to respond to unexpected factors, particularly those linked to the pandemic. Improvisation manifested itself in different ways, from small adaptations and adjustments, to large institutional movements, for example, the creation and performance of the Contingency Committee and the actions of planning and implementing remote teaching.

With regard to the limitations of the study, it should be noted that the context of the pandemic itself was one of the main challenges, given that the entire research construction process took place remotely, this context hampered greater and better access to information. Due to the regulations imposed by the government and by the HEI studied, at the time of the research, the interviews were carried out online via google meet. Interviews in the online context can impact data collection and result in the loss of some important elements, such as posture, tension, gestures or uncomfortable situations.

However, it can be cited as a facilitating factor, the fact that one of the researchers is part of the technical staff of the HEI, and has close contact with the interviewees, this helped in the process of collecting the interviews, as the managers felt comfortable to share lived experiences.

As theoretical contributions, this work emphasized the importance of understanding how improvisation develops in academic management practices, triggering factors, lessons and their results. It was possible to infer the importance of minimal structures for improvised practices, informing what is negotiable and what is not, while allowing flexibility. The research also contributed to studies that address improvisation as an organizational learning process. The results demonstrate that improvisation is a trivial and mundane process of organizational learning, not an extraordinary action.

Regarding practical and social contributions, it was found that improvisational practices have relevant importance in academic management, especially when existing plans and known management practices are insufficient to deal with environmental challenges. Thus, improvisation, in addition to being an essential tool for dealing with uncertain contexts, improves the repertoire of academic management practices and contributes positively to organizational learning.

As future studies, research in different contexts is suggested, in addition to crisis or turbulent environments, as well as studies that analyze the performance of improvisational practices in the long term. Finally, it is suggested that comparative studies be carried out in other universities, public and private, in order to understand the conditions and manifestations of improvisation, as well as the influence of organizational structures and directions in improvised practice.

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