

Lean Thinking and Stakeholder Theory: Process management proposal in a Federal Higher Education Institution

Lean Thinking e Teoria do Stakeholder: proposta de gestão de processos em uma Instituição Federal de Ensino Superior

Lean Thinking y Stakeholder Theory: propuesta de gestión por procesos en una Institución Federal de Educación Superior

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Abstract: *In the current context of management of Federal Higher Education Institutions (IFES), with continuous challenges, difficulties in dealing with rapid changes and demanding regulatory control over their actions, the competitiveness factor in the public sector has emerged, previously common only in the private sector. Aiming at alternatives to increase performance in complex scenarios, it is essential to adapt and consolidate theoretical bases for the application of incremental practices to Process Management in IFES. This research, based on the use of the principles and tools of Lean Thinking and Stakeholder Theory, aimed to propose an incremental methodology for process management, as an organizational intervention within the scope of the Federal University of Goiás (UFG), based on the evaluation of the process of functional progression of professors. The research method used was documentary research, field survey and field study, with collection of documentary and normative data, application of questionnaires (survey) and interviews with IFES employees, with the purpose of identifying the perceptions of value in relation to the process studied. As a result, a proposal was obtained for a new methodology involving the process vision, since UFG does not*

have a culture anchored in process management, with the indication of significant improvements in process fluidity, elimination of unnecessary operations and movements, reduction of waits and creation of value for stakeholders.

Keywords: *Lean Thinking; Stakeholder Theory; Process management*

Resumo: No atual contexto da gestão de Instituições Federais de Ensino Superior - IFES, com desafios contínuos, dificuldades para lidar com as rápidas mudanças e o exigente controle normativo sob seus atos, surge o fator competitividade no setor público, antes comum apenas no setor privado. Visando a alternativas para aumentar seu desempenho em cenários complexos, torna-se essencial adaptar e consolidar bases teóricas para a aplicação de práticas incrementais à Gestão de Processos nas IFES. Esta pesquisa, a partir da utilização dos princípios e ferramentas do *Lean Thinking* e da Teoria do *Stakeholder*, objetivou propor uma metodologia incremental à gestão de processos, como uma intervenção organizacional no âmbito da Universidade Federal de Goiás - UFG, a partir da avaliação do processo de progressão funcional docente. O método de pesquisa utilizado foi a pesquisa documental, o levantamento de campo e o estudo de campo, com coleta de dados documentais e normativos, aplicação de questionários (*survey*) e entrevistas com servidores da IFES, com o propósito de identificar as percepções de valor em relação ao processo estudado. Como resultado, obteve-se a proposta de uma nova metodologia envolvendo a visão de processos, uma vez a que a UFG não possui cultura ancorada na gestão de processos, com a indicação de melhorias significativas em fluidez do processo, eliminação de operações e movimentações desnecessárias, redução de esperas e criação de valor aos *stakeholders*.

Palavras-chave: *Lean Thinking; Teoria do Stakeholder; Gestão de Processos*

Resumen: *En el contexto actual de gestión de las Instituciones Federales de Educación Superior - IFES, con continuos desafíos, dificultades para afrontar cambios rápidos y el exigente control regulatorio sobre sus acciones, emerge en el sector público el factor de competitividad, antes común sólo en el sector privado. Apuntando a alternativas para incrementar el desempeño en escenarios complejos, es fundamental adaptar y consolidar bases teóricas para la aplicación de prácticas incrementales a la Gestión de Procesos en IFES. Esta investigación, utilizando los principios y herramientas del Lean Thinking y la Teoría de las Partes Interesadas, tuvo como objetivo proponer una metodología incremental para la gestión de procesos, como intervención organizacional en el ámbito de la Universidad Federal de Goiás - UFG, basada en la evaluación del proceso de progresión funcional docente. El método de investigación utilizado fue la investigación documental, encuesta de campo y estudio de campo, con recolección de datos documentales y normativos, aplicación de cuestionarios (encuesta) y entrevistas a empleados de IFES, con el propósito de identificar percepciones de valor en relación al proceso estudiado. Como resultado, se propuso una nueva metodología que involucra una visión de procesos, ya que la UFG no tiene una cultura anclada en la gestión de procesos, con indicación de mejoras significativas en la fluidez de los procesos, eliminación de operaciones y movimientos innecesarios, reducción de esperas y creación de valor para los stakeholders.*

Palabras clave: *Pensamiento Lean; La teoría de las partes interesadas; Gestión de proceso*

Introduction

The economic transformations that occurred in the 1970s and 1980s had repercussions on organizational structures in their form and function (Sennett, 2000; Harvey, 1994). The emergence of new technologies places all countries in the world in a single arena of intense competition (Hays & Plagens, 2002) and directly and indirectly impacts the state's ability to deliver services and public policies to society (Passos *et al.*, 2023; Harvey, 1994). In this context, new state management proposals emerged, collectively known as New Public Management (NPM), which rapidly internationalized (Hays & Plagens, 2002) based on the economy and efficiency practices of the private sector (Secchi, 2009; Bresser-Pereira, 1998; Osborne & Gaebler, 1992).

These vicissitudes have also affected the public education sector. According to data from the 2018 Higher Education Census prepared by the Anísio Teixeira National Institute of Educational Studies and Research [*Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira - INEP*] (2019), there are 63 federal universities and 40 federal institutes and education centers in Brazil, totaling 103 FHEIs with 122,982 tenured faculty members. This panorama requires special attention in terms of management, efficiency, and competitiveness given the specific obstacles and difficulties of Brazilian public education. In the current context, FHEI management faces ongoing challenges, having to adapt its administration to changing guidelines from higher-level bodies, in addition to demanding external regulatory oversight (Hargrave & Smith, 2025). Added to this is the factor of organizational competitiveness, previously only common in the private sector, but now increasingly encompassing the public sector, evidenced by the need to attract investment and raise funds (Oliveira, 2009).

Furthermore, stakeholders, and especially the relationships between them, point to greater organizational longevity (Machado Jr, 2009). In this sense, management-level elements must be clarified and established to facilitate interaction of these important organizational agents. According to Tapping and Shuker (2010), between 60% and 80% of all costs involved in meeting an organization's customer needs are administrative functions. In other words, most costs are concentrated in administrative areas rather than production. Thus, processes form the basis for the management and constant improvement of organizations to remain competitive. To this end, it is essential to adapt, unite, and consolidate theoretical foundations for applying new practices in the public sector (Marshall Jr. *et al.*, 2012).

Given the above, the study framework was based on the assumption of a lack of synergy between activities and people in an FHEI, indicating the need for an instrument for activity diagnosis and process management in the pursuit of efficiency and continuous improvement. Evidence of a lack of synergy was observed in the faculty progression process at the studied FHEI, involving rework, long waits, interventions, and requests for clarification from oversight bodies, as well as legal action, altogether generating increased workload and strain on various sectors and stakeholders within the institution.

Among the new management concerns is improved organizational processes, which cannot exist in isolation. Thus, Marshall Jr., Rocha, and Quintella (2012) emphasize the importance of Process Management (PM) for building a holistic vision within organizations. Womack and Jones (2004) highlight Lean Thinking (LT) as an approach to specifying value and better managing value-adding actions in organizational processes, focusing on reducing and eliminating waste in production processes, as well as developing continuous improvement within the organization's culture. In this context, Freeman (1984) highlights Stakeholder Theory (ST) as the goal of achieving balance among all stakeholders, reflecting a new way of directing processes. In a more recent text, Mahajan *et al.* (2023) present the development of Stakeholder Theory (ST).

When linking management and organizational process improvements, there are studies on the difficulties that Federal Higher Education Institutions (FHEIs) face regarding their resources (budgetary and human resources) for effective process management (Bittencourt, Ferreira & Brito, 2017). Even with these limitations, the principle of efficiency – Constitutional Amendment No. 19 (1998) – continues to demand positive results for public service, demanding professional performance from public agents and meeting the needs of society (Oliveira & Grohmann, 2016). The study by Albergo *et al.* (2025) stands out, using ST to measure social networks as a form of communication for Italian universities, including as a desire to meet the needs of society, as pointed out by Oliveira

and Grohmann (2016). Considering that the principles of LT and ST do not require large investments for implementation, the hypothesis arose that conducting this study could add greater efficiency and value to the Faculty Progression process flow at the studied FHEI, a process considered of great institutional importance, as it impacts the entire organizational structure. Based on this observation, this paper aimed to propose an incremental methodology for process management as an organizational intervention within the Federal University of Goiás, based on the evaluation of the faculty progression process.

To achieve this objective, we analyzed the efficiency of process management at a Federal Higher Education Institution using elements of Lean Thinking and Stakeholder Theory. The study focused on analyzing the impacts of these elements on management of the faculty progression process at UFG with the aim of proposing an incremental methodology for process management as an organizational intervention within the institution under study. The research methodological design employed action research, case studies, systematic observations, semi-structured interviews, and a questionnaire. Through research into published studies on PM, public administration, LT, and ST, we identified the essential and coexisting theoretical axes among these themes to guide the study of process management solutions at this FHEI. Based on content analysis and theoretical triangulation, the analyzed data were incorporated into applying Value Stream Mapping (VSM) of the process, following the paths of the theoretical axes.

The study is justified by the challenges faced by FHEIs, such as rigorous regulatory oversight, rapid change, and the need for efficiency. The study proposes an incremental methodology based on Lean Thinking and Stakeholder Theory to optimize faculty progression at the Federal University of Goiás (UFG), reducing rework and bureaucracy. The main beneficiaries include: (1) Faculty – Reduced wait times and greater transparency; (2) Technical Staff – Less rework and standardized processes; (3) Managers – Better use of resources and strategic efficiency; and (4) Regulatory Agencies – More agile and reliable processes.

UFG was chosen for its administrative scope, directly impacting faculty and academic quality; its high volume of processes, requiring greater efficiency in faculty progression; and the feasibility of the study, facilitated by access to data and interviews. Thus, the institution becomes a model for optimizing management in other FHEIs by promoting more effective and sustainable public management practices.

The text is structured in three parts until the final considerations: (1) presentation of the theoretical framework; (2) presentation of the research methodological framework and the process management proposal; and (3) discussion of the implications of the practices in the context of the research proposal, considering the trend that the development of a process management methodology is important for significant improvements in process fluidity, elimination of unnecessary operations and movements, and above all, reduced waiting times and value creation for FHEI stakeholders. The next section presents the theoretical discussion.

Process Management and Context in Public Organizations

The 1980s saw a surge in organizational transformations to increase the speed of business processes (Sennett, 2000), as well as discussions about reengineering and the pursuit of the process management concept which became popular in the 1990s. Changes between customers and competitors in a competitive environment are the forces driving the need for new ways of managing

organizations (Hammer & Champy, 1994).

Clearly, Marshall Jr. *et al.* (2012) define process as “the transformation of resources into something expected with added value” (p. 33). For these authors, every organization is permeated by processes which form the basis for managers to guide its progress. For Oliveira and Grhomann (2016), a process is a set of activities used to organize and transform inputs into results according to customer needs.

Sordi (2012) highlights the difference between process management and management of processes, distinct concepts which are often confused in various studies. Management of processes has a limited and isolated scope.

Process management (PM) is the continuous improvement of organizations, as they are constantly driven to modify their procedures to remain competitive (Marshall Jr. *et al.*, 2012). It proposes a new management culture to make organizations more flexible (Silva, 2014; Mahajan *et al.*, 2023). Organizations need to employ efficient and effective processes in seeking to achieve more consistent results and deliver quality products and services to the market. The institutionalization of process management contributes to organizational improvement, aiming for performance and sustainability (Rossés, Scott, Godoy, Silva & Viero, 2017).

According to Sordi (2012), the interdependence between the parts of an organization is the cornerstone of PM theories, while Hammer (2004) emphasizes that improvement should not be isolated to various departments, or so-called functional silos, but should permeate all organizational processes from one end to the other. Salgado *et al.* (2013) add that PM is marked by the significant involvement of all people in the organization.

Trkman (2010) cites elements such as the alignment of processes with business strategy and the alignment of processes with technological tools as critical success factors for PM. The critical success factors for process management most cited in research are: senior management support and commitment; training and capacity building; process performance measurement; alignment between strategy and processes; organizational culture; employee engagement; and communication (Ribeiro & Costa, 2014).

In the context of public administration, Oliveira and Grohmann (2016) conclude that the PM perspective is that organizations are formed by a set of processes which must be understood, documented, and modeled to provide added value to their strategy, goods, and services. In order to achieve this, new alternatives are needed to manage these processes and increase the satisfaction of all those who interact with the organization (Falcão Junior & Santos, 2016). Thus, PM is reaffirmed as a method of renewal and stimulating the quality of services provided (Falcão & Santos, 2016).

According to Silva (2014), following the reform initiatives of Margaret Thatcher’s Conservative government in the United Kingdom in 1979, public administration has been under pressure from a widespread movement to adapt public organizations to changing social interests and demands, known as New Public Management (NPM). In this sense, many countries implemented policies to reduce state involvement faced with pressure from some internal economic sectors and international organizations (Crawford, Costello & Bentley, 2003).

The economic crisis of the 1970s, combined with the conservative policies underlying the NPM premises, opened the way for debate on managerial public administration, which aims to adjust public finances and improve service delivery (Bresser-Pereira, 1998). However, several obstacles remained to full implementation of the Managerial State, and many characteristics of the patrimonialist and bureaucratic models are still evident at various management levels (Vieira & Vieira, 2004; Cherques & Pimenta, 2014; Abrucio & Loureiro, 2018).

The constitutional principle of efficiency included by Constitutional Amendment No. 19 (1998) in Brazil demands positive results for public service, demanding professional performance from public officials and prompt response to society's needs (Oliveira & Grohmann, 2016). However, the Brazilian government faces serious difficulties and limitations in improving the quality of its services, revealing the slowness and inflexibility of its administration. Despite this, there are signs that the government is seeking to improve its public governance processes and develop new strategies (Matias-Pereira, 2010).

Demands for improved performance and management are felt in various areas of the government, including in higher education institutions (FHEIs) (Garcia, 2015). The involvement and commitment of people to change are essential for process-oriented transformation to occur in an organization (Garcia, 2015).

The emphasis on PM in a conscious and collaborative manner improves workflow, enabling systemic management of deliveries and providing a more orderly and safer routine for the employees involved (Machado, 2019). However, it is necessary to overcome the functional vision to achieve this, proposing possibilities to eliminate unnecessary and/or duplicate tasks and activities (Falcão & Santos, 2016). Therefore, the next topic presents Stakeholder theory and its impact on the longevity of organizations.

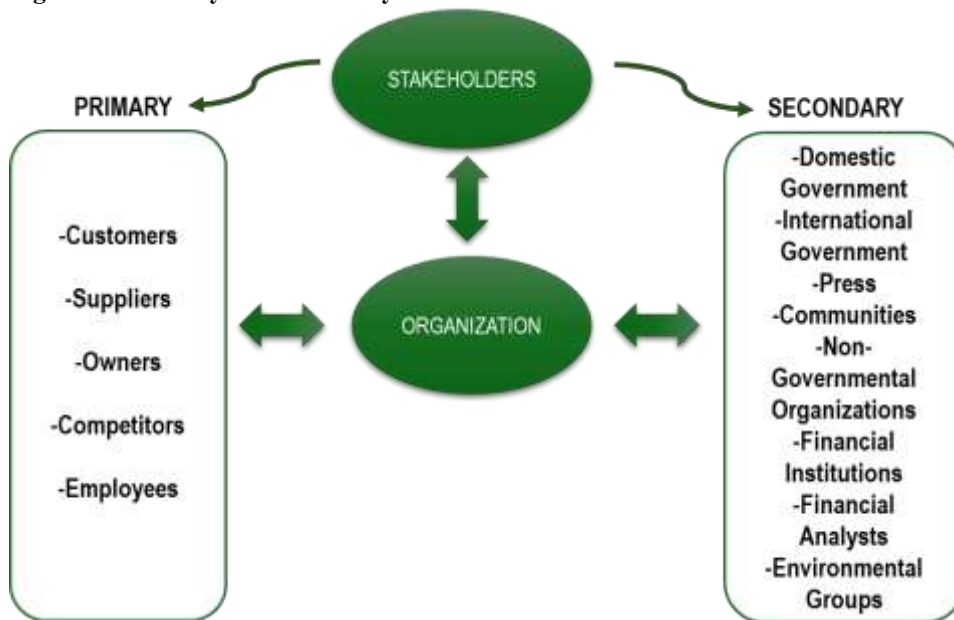
Stakeholder Theory and the Longevity of Organizations

Until the mid-1980s, management studies argued that organizations should only be concerned with profits, ensuring that their owners and shareholders obtained financial gains (Friedman, 1970). However, for Carroll (1979), social and technological changes brought about changes in organizational environments and new concepts for organizations to build relationships with diverse groups, focusing on social responsibility. In contrast to Friedman's theories, Freeman's studies argued that organizations could establish more consistent relationships with their various interest groups from a legal and ethical perspective related to stakeholders (Carroll, 1979).

Along the same lines of thought, Freeman (1984) developed Stakeholder Theory, describing organizations as part of society, and thus should be considered more complex and socially responsible for the impacts their activities have on society, contributing to social well-being. Freeman, Wicks, and Parmar (2004) also emphasize the need to identify, value, and integrate relationships between the organization and its stakeholders, emphasizing the concept of stakeholder management: management's effort to develop relationships, inspire, and deliver value to stakeholders in order to balance the satisfaction of the expectations of these groups and individuals.

In this sense, Clarkson (1995) also contributes by developing classifications for stakeholder groups. First, the stakeholders responsible for the organization's continuity are identified, called primary or primary stakeholders; its shareholders, investors, employees, customers, and suppliers, among others. Next, the other stakeholders who, in some way, influence or are influenced by the organization's activities are identified, called secondary stakeholders, as illustrated in Figure 1.

Figure 1 - Primary and secondary stakeholders.



Source: Adapted from Clarkson (1995)

The organization is part of a system of primary stakeholders with high relational complexity, whose expectations can compromise the organization’s survival if not met (Clarkson, 1995). Primary stakeholders are directly related to the organization’s survival and longevity, as they are essential elements and can be considered decision-makers (Machado Jr., 2009).

Secondary stakeholders, shown in Figure 1, may at some point oppose the organization’s strategies aimed at primary stakeholders, in addition to having the ability to exert influence and mobilize public opinion for or against the organization (Clarkson, 1995).

According to Machado Jr. (2009), stakeholder relationships are closely linked to the strategy, decision-making process, culture, and ethical approach of organizations, so that they achieve longevity by managing the needs of these stakeholders. Freeman (1984) emphasizes that although the stakeholder concept may seem simple, it becomes quite complex in its application, given that its management involves multiple levels of analysis and requires a strategic approach to stakeholder expectations.

Thus, Freeman (1984) divides stakeholder analysis into two stages to incorporate stakeholder concerns into the organization’s routines and monitor these relationships with the organization. The first identifies and analyzes the interests of each party separately. The second stage integrates the identified interests, aiming to develop a plan which adapts to the most diverse parties.

Freeman (1984) also highlights three other levels for stakeholder management to understand the processes used to manage stakeholders: the rational level, which seeks to identify and understand stakeholder expectations; the procedural level, which seeks to understand the processes used by the organization in its relationships with stakeholders and compare them with the results obtained at the

rational level; and the transactional level, in which it is necessary to understand the negotiations and exchange relationships between the organization and its stakeholders, analyzing whether they are directed towards the results obtained at the rational level.

The simple adaptation and transposition of the stakeholder concept from the private sector to the public sector cannot be accomplished without considering the complexity of the multiple stakeholders involved in the latter. The term stakeholder in the public sector of central countries has played a prominent role in management theory and practice for at least 40 years, since the mid-1980s (McAdam, Hazlett & Casey, 2005).

Attention to stakeholders is important throughout the strategic management process because the “‘success’ of public organizations depends on the satisfaction of key stakeholders according to their definition of what is valuable” (Bryson, 1995, p. 25). To this end, it would be appropriate to treat each stakeholder category individually, constructing performance metrics for each to verify the benefits generated in the organizational management process (McAdam, Hazlett & Casey, 2005). In turn, the process of value creation using the Lean Thinking philosophy is discussed below.

The Lean Thinking Philosophy to Create Value

Although the Lean Thinking (LT) philosophy emerged from the automotive industry, it has been adapted to both the production and administrative sectors of a wide range of public and private organizations (Gonçalves, Melo & Viana, 2015). LT was inspired by the Toyota Production System, and can be conceptualized as a management and leadership philosophy aimed at specifying value and better managing of value-creating actions in processes, from the supplier to final delivery continuously, without interruptions or waste, in an attempt to improve the organization’s results and enhance customer value (Womack & Jones, 2004; Tapping & Shuker, 2010; Pinto, 2014; Yadav, Jain & Mittal, 2024). Value is always defined by the customer, expressed through their expectations for a product or service. To do so, it is necessary to understand who the customer is. From then on, it is up to the organization to identify the customer’s needs and strive to meet them within a specific timeframe, at a price, and with quality that can meet customer expectations (Womack & Jones, 2004).

Focusing on reducing waste and value-creating activities, Womack and Jones (2004) established five fundamental and synergistic principles for transforming an entire organization: 1) Specify customer value: identify which product or service characteristics meet customer expectations and needs; 2) Identify waste in the value chain: identify the value chain for the product or service, identifying waste in the process and eliminating it, better adapting production activities; 3) Continuous flow: promote greater fluidity in the processing of the product or service, allowing only value-adding activities, minimizing waste; 4) Pull production: Allowing production needs to be guided by the customer, producing only what is necessary and delivering only what the customer truly wants, at the exact moment they need it, neither before nor after; and 5) Strive for perfection: Pursuing perfection in every detail, always seeking to improve the current situation continuously and permanently.

Tapping and Shuker (2010) identify waste as a major problem in administrative environments, as it is often camouflaged in processes and difficult to detect. However, the authors emphasize that the same Lean principles for combating this problem in the manufacturing environment can be replicated in the service environment, with the same purpose. When studying the problems that negatively impact a production system, Ohno (1997) identified seven types of waste which can deviate from lean thinking in production: waiting, unnecessary transportation, unnecessary movements,

excess storage, defects and rework, unnecessary or incorrect operations, and overproduction.

In an investigation into the implementation of the LT philosophy in the public sector, Radnor and Walley (2008) identified the barriers which hinder the success of lean thinking in UK public organizations, namely: lack of a clear customer focus; excessive procedures; people working individually or in siloed departments; excessive targets; lack of strategy; belief that employees are overworked and underpaid; and lack of understanding and systemic vision of process flow. The organization must be committed to adopting the LT philosophy in order to be successful in its implementation. Therefore, its engaged leaders must motivate people to change, from the highest to the lowest levels, involving everyone in accordance with the organization's strategic objectives. These people ensure the performance of the improvement system and the company's sustainable growth (Nunes & Faccio, 2014).

Beyond theory, Value Stream Mapping (VSM) and *Kaizen* stand out as practical tools for implementing LT in organizations. VSM can be defined as a diagram which demonstrates the design of all the stages through which the transformation of resources, information and activities necessary to meet customer demands goes through, from start to finish (Benetti, 2010; Liker & Meier, 2007).

Value stream maps are designed in current and future states, and their management performs systematic data analysis to understand the entire process, plan, and link initiatives, suggesting cost reduction, waste elimination, continuity in the flow of work information, and the pursuit of continuous improvement (Rother & Shook, 2003). For the authors, VSM is much more useful than quantitative tools, since it allows for a detailed view of how the production unit should operate and what should actually be done to reduce the operation's lead time.

Based on mapping and critically analyzing the current state, one can begin designing a new ideal model with improvements designed for the future. The process for mapping the future state involves three phases: understanding customer demand, implementing continuous flow for correct execution of activities, and leveling work evenly to reduce waiting times, leaving only value (Tapping & Shuker, 2010). VSM uses metrics, typically measured in minutes or seconds, which help drive improvement and eliminate waste: the lead time metric (TLT) is the total time spent between a customer's order and delivery; the work cycle is the time that elapses between the start of a process or activity and its completion, which can be broken down into components such as processing time, total waiting time (TWT), moving time, rework time, and others; and the total cycle time (TCT) is the sum of the individual work cycle times. As presented in the Tapping and Shuker (2010) models, the process lead time (TLT) can be calculated using the equation $TLT = TCT + TWT$. Obtaining the lead time using the equation $TCT/TLT = TAV\%$, it is possible to calculate the added value rate or percentage of process added value (TAV), meaning the period in which work elements were effectively executed that effectively transform the product or service as perceived and evaluated by the customer (Tapping & Shuker, 2010).

Kaizen plans can be understood as continuous improvement and can be applied to an activity or an entire value stream, meaning they can modify processes to make them better (Tapping & Shuker, 2010; Rother & Shook, 2003). Furthermore, it is not necessary to create a perfect plan; just create a *Kaizen* plan that is easy to use. The plan only needs to have enough to get people started, and based on practical understandings, it can be modified as improvements are implemented. However, it is important to emphasize that a *Kaizen* environment must exist for improvements to be sustained and for team efforts to be recognized and cultivated (Tapping & Shuker, 2010). Furthermore, as with many management approaches, continuous improvement is not a quick fix, nor is it quick to produce results. Improvements gradually emerge, forming a continually repeated cycle aimed at achieving perfection

(Pinto, 2014).

Kaizen plans are based on Lean Thinking's continuous improvement approach and eliminate waste and increase efficiency. They directly relate to the PDCA (Plan-Do-Check-Act) cycle, ensuring sustainable improvements. In the study, *Kaizen* plans are a practical extension of PDCA in the UFG faculty's career progression: Plan (problem identification); Do (improvement implementation); Check (impact monitoring); and Act (continuous adjustments). This integration transforms FHEI's process management into a dynamic and adaptable model, promoting efficiency and value for stakeholders, as will be discussed in the next section.

FHEIs and the Teaching Functional Progression Process

The research setting for this study was the Federal University of Goiás (UFG), an FHEI (Federal University of Goiás) characterized by its teaching, research, and extension program. Its goal is to "be a university dedicated to the development of individuals in an intellectually virtuous environment, resulting from the production of knowledge obtained through academic research and artistic and cultural production" (UFG, 2025, p. 35). The organization and operation of this FHEI are regulated by its bylaws, and institutional policies are addressed in the Institutional Development Plan (*Plano de Desenvolvimento Institucional - PDI*), which presents the FHEI's mission and institutional principles, as well as its set of objectives and goals, defined every four years.

According to its current PDI 2023-2027, the personnel management policy of the FHEI under study was developed to promote the human and professional development of the institution's employees. Achieving this objective involves "implementing actions aimed at improving employee appreciation policies, fostering and promoting professional and career development, more efficient occupational safety management with a focus on quality of life, promoting employee health, and streamlining processes in the area of human resources management" (UFG, 2025, p. 84).

Considering that the academic activities which fulfill the mission of FHEI are interconnected with the career progression of its professors, the FHEI faculty career progression process is considered part of the necessary support for the organization's functioning. Thus, we begin with the structure of the faculty career path and its legal basis in order to comprehensively describe the process. The Higher Education Teaching career path is composed of five classes: A and B, with two progression levels each; C and D, with four progression levels each; and E, with a single level and no progression. Entry into the career will always occur at the first level of Class A, upon approval in a public examination of tests and qualifications (Law No. 12,772, 2012).

Functional development in the teaching career occurs through progression or promotion, where "progression is the advancement of a staff member to the next higher level within the same class, and promotion is the advancement of a staff member from the lowest level of a class to the first level of the subsequent class" (Law No. 12,772/2012, art. 12). The requirements for progression and promotion in the teaching career simultaneously include completion of a 24-month period of effective service at each level and passing a performance evaluation process.

Under Law No. 12,772/2012, the competent councils within each FHEI are responsible for regulating the procedures for the teacher performance evaluation process for progression and promotion purposes, following the general guidelines for the process established by the Ministry of Education (*MEC*). In this case, in compliance with the legislation, FHEI regulated the teacher performance evaluation through Resolution No. 18 (UFG, 2017a), approved by its University Council

(CONSUNI). Additionally, Law No. 12,772 (2012) also provided for the creation of the Permanent Teaching Staff Committee (*Comissão Permanente de Pessoal Docente - CPPD*) in all FHEIs in Brazil. This committee is intended to advise the institution on formulating and monitoring the implementation of teaching staff policies, including performance evaluation for progression and promotion, among other responsibilities.

It is important to emphasize that both the progression and promotion processes have similar procedures and administrative activities, with the only difference in nomenclature due to the respective legislation, except for promotion to Class E, which includes an additional step for evaluation of a report and will not be discussed in this study. Therefore, given the similarity between the progression and promotion processes, and to simplify their understanding as career development, both processes were unified and treated as solely teaching progression processes in this study. In the next topic, the methodological procedural elements of the study are detailed.

Methodological elements of the study

This is a descriptive research study with an applied nature in terms of its ends. The means it involved documentary research, collecting secondary data (documents and legal frameworks), and action research collecting primary data, respectively, through questionnaires (surveys) and semi-structured interviews (Collis & Hussey, 2018; Thiollent, 2018; Gil, 2008), in addition to a bibliographical survey. Action research was essential for developing the future state of the faculty progression process at UFG. The researchers' direct involvement with the institution enabled identifying problems, testing solutions, and iterative adjustments, ensuring that the proposed methodology was realistic and applicable. This method enabled continuous interaction with stakeholders, allowing suggestions and needs to be incorporated into the new process management model, aligning with the principles of Lean Thinking and Stakeholder Theory.

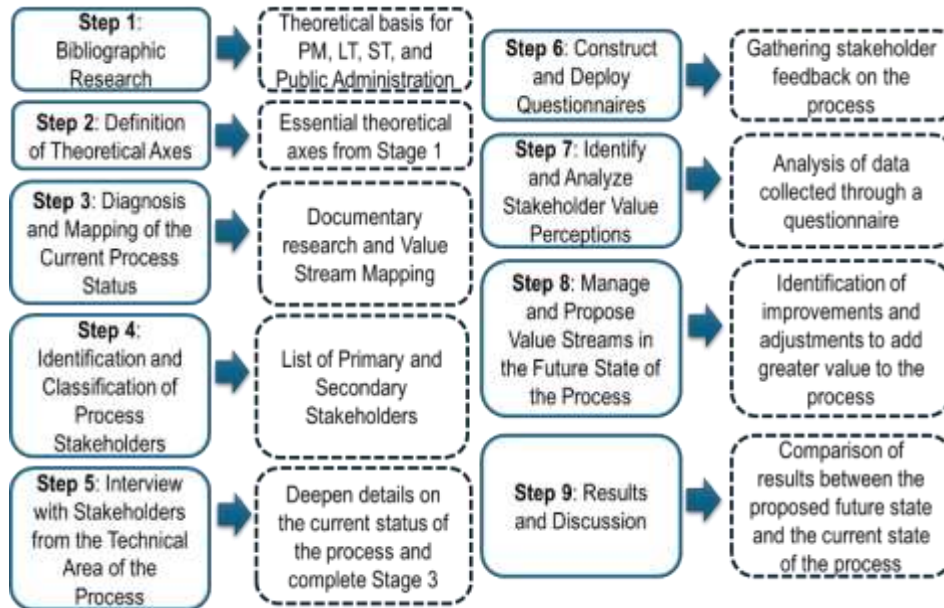
The Faculty Functional Progression process was selected as the documentary basis to conduct this study, considering its administrative scope, the number of people who could benefit, the researchers' proximity to the process, the number of departments involved, its complexity, the importance the process has for FHEI employees, and the direct and indirect impact it may have on other aspects of the internal and external institutional environment. The methodological approach consisted of nine Steps which can be summarized into two main parts: (1) gathering theoretical and documentary references on the aspects studied; and (2) applying the theoretical knowledge acquired to the selected process and discussing the results, meaning mapping its current state, identifying the value stream, classifying and analyzing its stakeholders, mapping the future state, and verifying the impact on the process' value stream through the possibilities for eliminating waste and aligned with the stakeholders' perception of value. Figure 2 demonstrates the proposed process management methodology for this study and details these parts.

The theoretical framework related to the topics of Lean Thinking, Stakeholder Theory, Process Management, and Public Administration was selected based on the literature search in **Step 1**. Then, the main key elements of each topic addressed in the literature search were identified in **Step 2**, analyzing their relationships. Next, seven essential theoretical axes and coexisting among the aforementioned themes were extracted from this procedure to guide the study of solutions to the research problem, namely: efficiency, results optimization, strategic alignment, customer focus, value, commitment, and quality.

In turn, the diagnosis and mapping of the value stream of the current state of the faculty

advancement process were performed in **Step 3**. The process under analysis was modeled as closely as possible to current practice, given that it was observed that some departments perform activities in ways which differ from those established in Resolution No. 18 (UFG, 2017a), without standardizing the time for analysis, instruction, documentation, and process flow. We subsequently sought to map the process with the flow that was used most frequently among the requests analyzed in the sample used as a way of adapting the study, and whose completion time was closest to the average timeframe verified in the sample.

Figure 2 - Proposal for Process Management Methodology



Source: Elaborated by the authors (2025)

A total of 20 completed advancement and promotion requests were analyzed, randomly selected from the FHEI Electronic Information System (*Sistema Eletrônico de Informações - SEI*) among the 1,097 requests publicly generated between September 20, 2023, and December 31, 2024. The period used is justified by two main reasons: the end of an academic year and the fact that the processes were already finalized. Then, VSM metrics (Tapping & Shuker, 2010) were used to quantitatively measure the current status of the process flow.

It is important to emphasize that it was necessary to verify and supplement some data in Step 3 which were obtained through interviews with staff members who work directly with the process in some technical areas of FHEI. However, the interviews were conducted in conjunction with Step 5, only after the stakeholders had been identified and classified in Step 4.

Next, stakeholders were identified and classified in **Step 4**. The stakeholders involved in the faculty advancement process at the FHEI were listed using the brainstorming method, as shown in Table 1. Considering the interests of each stakeholder, these stakeholders were classified as primary and secondary, according to Freeman (1984) and Clarkson (1995). This used the main criterion of stakeholder “proximity”, considering the organizational results and objectives.

Table 1:

<i>Stakeholders</i>	Primary	Secondary	Area
Professors	X		End customer
Academic Unit (AU)	X		Technical area
Board of Directors/AU	X		Technical area
Permanent Teaching Staff Committee (CPPD)	X		Technical area
Federal Prosecutor's Office (PF)	X		Technical area
Financial and Human Resources Department (FIN)	X		Technical area
Human Resources Department (AD)		X	Technical area
Rector's Office		X	Management
Students		X	Macroenvironment
CAPES		X	Macroenvironment
MEC		X	Macroenvironment
General Comptroller of the Union (GCU)		X	Macroenvironment

Stakeholders and its classification area

Source: Elaborated by the authors (2025)

Semi-structured interviews were conducted in **Step 5** with staff members who are part of the Technical Area's primary stakeholder groups. The objective was to investigate how the staff members responsible for parts of the process in each department perform the process' activity flow.

In order to delve deeper into the details observed in the document analysis and gather further insights from staff members in direct technical contact with the process under study, the interview consisted of the following script: How does a progression request reach you? What procedures do you follow when receiving a progression request? What activities do you perform on the request? On average, how long does it take to complete each procedure? After analyzing the interviews, the information obtained was used to complement the diagnostic process initiated in Step 3.

The research questionnaire was developed and administered in **Step 6**. Two questionnaires were developed based on the theoretical axes extracted in Step 2, and associated with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaires were

developed for application to the two primary stakeholder groups in the faculty advancement process - professors, as end clients, and staff members involved in the process, as members of the technical department.

The electronic questionnaire addressed to the process' end clients consisted of 27 closed-ended multiple-choice questions and 1 open-ended question. It was divided into two parts: one to characterize the stakeholder profile (6 questions) and the other to assess their interests and opinions (21 questions). The questionnaire addressed to technical department stakeholders (technical staff) consisted of 40 closed-ended multiple-choice questions and 1 open-ended question. It was divided into 7 questions to characterize the stakeholder profile and 33 questions to assess their interests and opinions. During the period in which the survey instruments were administered, there were 20 "end clients" who were in the Functional Advancement process and participated as respondents. A total of 12 staff members and technicians (technical department) also responded to the questionnaire. In selecting study participants, samples were defined by non-probabilistic criteria and selected using the intentional method (Marconi & Lakatos, 2010). The chosen staff members for the questionnaire application sample were directly involved in the current teaching career progression process at the FHEI, including all staff members who work in the technical instances implementing the process, and a sample of 50% of teachers who have already achieved at least one effective career progression at the Institution.

The process' perceived value from the stakeholders' perspective was then identified and analyzed in **Step 7**, as well as their needs regarding the teacher career progression process. Descriptive statistics and qualitative data analysis were used (Vergara, 2005).

Then, the process was managed using theoretical triangulation in **Step 8**, anticipating "the various angles of analysis, the various needs for perspectives, and the results so that the view is not limited and the result is not restricted to one perspective" (Tuzzo & Braga, 2016, p. 141). Based on information about the stakeholder groups perceived value and needs, and considering the essential theoretical axes of this study, the acquired knowledge and techniques were applied in this step to suggest improvements and adjustments, optimize results, add value to stakeholders, reduce waste, and increase process efficiency. This resulted in the proposed value stream mapping of the process in the future state.

Finally, the results found in the value stream mapping step of the current process were compared with the results obtained in the value stream mapping of the process in the future state in **Step 9**, after applying the method executed in Step 8. The following section presents and discusses the results obtained.

Results and Discussion

The study identified important points from combining LT and ST, dividing this section into four discussion topics: (1) Process diagnosis and value stream mapping in the current state; (2) Identification and study of Stakeholders; (3) Management and mapping of the value stream in the future state; and (4) Theoretical Axes.

1. Current State Identification and Value Stream Mapping

It was observed that the functional progression process consists of analysis procedures such as

evaluations and opinions, as well as bureaucratic procedures for instruction and process referral. Thus, based on the first principle of Womack and Jones' (2004) theory, the VSM tool was used to identify its value stream and form the basis for eliminating Ohno's (1997) seven types of waste from the value chain.

The current value stream begins with the customer's demand, in this case the teacher. The process flows through the *SEI* between the departments responsible for each activity, adding value and eliminating waste until the service is delivered back to the client teacher. The VSM cycle times for the current state of the process were obtained through interviews with the staff members involved in executing the process, who reported the actual time spent on each activity without interruptions to the workflow. Waiting times were obtained from the times observed in the electronic history of the requests used in the document sample. The time spent after each activity and its progress (in business hours at the institution) was recorded in business days and hours (during office hours), as well as the time the process was idle. The simple average between the waiting times and the conversion to minutes was then calculated.

It was identified that the current process consists of 21 activities after the client's request, distributed in a flow among 10 instances within FHEI's Units and Departments. The VSM (Variable Income Tax) identified that 332 minutes (TCT) are currently spent executing the activities that should generate value for the client. The TWT is 51,697 minutes, which do not add value to the client, as they are minutes spent waiting. The lead time identified was 52,029, meaning the total time spent processing and delivering the request to the client. The TAV metric resulted in 0.63%, which means that only 0.63% of the total time spent processing an order is spent on activities that actually generate value for the customer.

According to the second principle of Womack and Jones (2004), occurrences of all seven types of waste listed by Ohno (1997) were identified, as presented in **Table 2**.

Table 2 – Types of waste identified in the VSM of the current process state

Wastes of Ohno (1997) and Description
1 – Waiting: Application queues at all stages and sectors.
2 - Unnecessary Transportation: Inclusion of unnecessary documents, dispatches, and acknowledgment records. Splitting activities by dividing responsibility among several different employees, increasing the process flow without generating additional value.
3 - Unnecessary Movement: Sending a process from one department to another, without purpose, as well as assigning a process from one server to another, also without purpose.
4 – Storage: Inventory of requests which are stalled in some sectors, but could be completed, and/or requests that were stored awaiting a requirement, but could now be processed.
5 - Corrections and Control: Returning the process to correct information, redo activities, complete documentation, and/or send it to the correct department. Additionally, errors may persist until the process is complete without being identified and corrected, which can cause future problems.
6 – Processing: Activities which do not add value or are not necessary for executing the process, which can be eliminated. Ex: activities that are duplicated or triplicated during processing of the same request, and others that have no purpose.
7 - Overproduction

Analysis of requests processed at inappropriate times (well before the minimum deadline for the teacher to complete the requirements for advancement). This situation results in wasted time processing, analyzing, and denying a request which could have been submitted at a later date, when it would certainly have been approved within the deadline.

Source: Elaborated by the authors (2025)

The document analysis based on the sample of completed progression requests also revealed more details about the current process flow, given that the *SEI* records the entire history of units and agencies, users, date, time, activities, and movements in the generated processes. It was initially possible to identify that the process takes an average of 173 business days from request to completion, with the average delay for granting the request (issuance of the order) being 85 days. Consequently, delays in issuing the order granting progression result in delays in payment of their respective financial effects, which is detrimental to the interested party, increasing the wait time for full completion of the process, whose average delay for final delivery to the professor was 152 days. Next, the stakeholders are identified and analyzed.

2. Identification and study of Stakeholders

As established in Step 4 of the methodological approach, the primary stakeholders were divided into two groups: (1) technical staff involved in the process execution; and (2) the end customer: faculty interested in career advancement or promotion. The questionnaire to identify value from the technical staff perspective was sent to a total of 245 staff involved in some capacity in the process execution within the Institution's Units and Departments. The response rate for this group was 23.6% with 58 respondents. Then, 1,100 questionnaires were sent for the second group among the 2,563 tenured faculty members at FHEI to identify value from the end customer perspective. The number of questionnaires sent was determined by a sample of 50% of faculty who had already achieved at least one career advancement. The data collection period was 30 days, and despite the researchers' persistence and reminders, only 117 responses were obtained, equivalent to a 10.6% response rate.

Table 3 shows that the majority of the 175 total survey respondents were end-user teachers (66.8%). In addition to the participant profile, it is important to highlight that 3% of teachers indicated they were unfamiliar with the rules for teacher progression, and 14% considered the process at the FHEI to need a review.

Table 3 - Profile of Research Participants (% of total responses)

Characteristics	Qty.	%
They are end clients of the progression process	117	66.8
They are part of the technical area responsible for the progression process	58	33.1
They have up to 3 years of experience at UFG	15	8.6
They have 3 to 15 years of experience at UFG	114	65.1
They have more than 15 years of experience at UFG	46	26.3

They are well-versed in the rules for faculty progression	47	26.9
They are partially familiar with the rules for faculty progression	87	49.7
They are unfamiliar with the rules for faculty progression	26	14.9
They see the need to review the progression process	141	80.6
They do not see the need to review the progression process	16	9.1

Source: Elaborated by the authors (2025)

From the analysis of the responses in the questionnaires, and in alignment with the first principle of Womack and Jones' (2004) theory of specifying what constitutes value to the client, the characteristics which can satisfy the expectations and needs of teachers adding greater value to the functional progression process were observed. In this sense, Table 4 presents only the factors evaluated by the group of teachers with scores between 4 and 5 on a scale of 1 to 5 points, which corresponds to very important and extremely important in the process.

Table 4 - Factors considered by teachers as very important for the process of teacher functional progression (in % of responding teachers)

Factors	%
Quality service delivery from the beginning of the process (no errors for later correction)	99.1
Commitment of the staff involved in process management	98.3
Commitment of the UFG Administration to process management	98.3
Deadline for inclusion of progression on the payroll	98.3
Professional training of the technical area executing the process	97.4
Means of communication for troubleshooting for stakeholders in the process	96.6
Deadline for issuing the ordinance granting progression	95.7
Professor training on the process	94.9
Quality control of the process before completion/delivery	94.9
Friendliness in customer service	94.0
Improved interdepartmental communication during the process	93.1
Mapping the process flow	92.3

Source: Elaborated by the authors (2025)

In seeking to understand the exchange relationships between the organization and its stakeholders, Table 5 highlights the main groups of suggestions presented by the research participants through the questionnaire, totaling 90 suggestions. The most frequently cited areas for change include teacher training on the rules and deadlines for progression, with 12.2% of respondents suggesting this; reviewing the scoring table for teaching activities for progression, with 11.1% suggesting this; and streamlining the completion process, with 10% suggesting this.

Table 5 - Most suggested topics for implementation in the teaching functional

progression process (in number of indications and in % of responding staff members)

Suggestion groups	Qty.	%
Teacher training on progression rules/deadlines	11	12.2
Review the progression scoring table	10	11.1
Speed up the process	9	10.0
Review the progression criteria table	8	8.9
Training/Improvements in the use of SEI	6	6.7
Adopt stricter criteria for progression	5	5.6
Remove the application from the teacher's responsibility	5	5.6
The technical area should alert the teacher about their deadlines	4	4.4
Improvements in the use of the assessment by students	4	4.4
Improvements/training in the use of the teaching activity registration system	4	4.4
Review of the date of progression effects	4	4.4
Reduce the burden on CA/AU	4	4.4
Simplify the process	3	3.3
Support from the technical area to the teacher during the process	2	2.2
Clarify the gaps in Resolution No. 18/2017	2	2.2
Impartiality of evaluators and management in evaluations	2	2.2
Deadlines for all instances through which the process is processed	2	2.2
Review of the Management evaluation	2	2.2
Review the CA/AU model	2	2.2
Disclosure of the quantitative results of the processes executed by the Technical Area	1	1.1

Source: Elaborated by the authors (2025)

In an analysis extracted from the critical responses in the research instrument (open questions), it was possible to perceive that there are still many expectations of teachers and the technical area to be met during the teaching functional progression process, given that 40.3% of these parties demonstrate an interest in the current process being revised, as demonstrated in Table 6.

Table 6 - Critical analysis of primary stakeholders in relation to the current teaching functional progression process (in % of respondents)

Dissatisfaction factors	% Prof.	% a. T.	%Total
They consider that the current process does not meet teachers' expectations	36.7	29.3	66.0
They agree that there are weaknesses and that there is a need to review the current process	16.2	24.1	40.3

They consider that they have difficulties in accessing the rules and information about the process	19.0	10.3	29.3
They are not satisfied with the results generated by the process	19.6	8.6	28.2
They say they are not fully familiar with the rules of Resolution No. 18/2017 regarding the process	18.0	8.6	26.6

Source: Elaborated by the authors (2025)

During the rational, procedural, and transactional study of the process stakeholders, it was observed that the technical areas do not analyze their strengths and weaknesses in relation to the administrative results they deliver, which may provide another opportunity for improvement in *Kaizen* plans. Furthermore, it was found that the faculty progression process received a positive evaluation in the responses to the questionnaire. Despite pointing out problems, it is clear that stakeholders rate their overall satisfaction more on the strengths and effectiveness at the end of the process than on the weaknesses such as delays and rework, which does not eliminate the need for continuous improvement and efficiency to achieve greater stakeholder satisfaction. The next item highlights the management, future-state value flow mapping, and *Kaizen* of the studied organization.

3. Management, Future State Value Stream Mapping, and *Kaizen*

The current process was managed, including areas for improvement, to transform it into a future-state value stream proposal with greater added value. A set of improvement suggestions was developed based on research into the process' legal basis, the LT principles, and the study of stakeholders' value perceptions. The identified value, when legally possible, was incorporated into developing the proposed future-state process map. In this regard, amendments to FHEI's Internal Resolution No. 18 were also proposed, with appropriate legal justification.

The following changes to the current Resolution No. 18/2017 are proposed for inclusion and approval to better regulate teaching career development at UFG and support the transformation of the career progression process:

1. New procedures for the annual teacher performance evaluation between the team and the immediate supervisor through the *SAD (Sistema de Avaliação de Desempenho)* – UFG Performance Evaluation (PE) System;
2. The PE will be responsible for managing the annual teacher performance evaluation process;
3. The PE will have the authority to monitor gaps and process requests for teacher advancement;
4. Unification of the ECs (Evaluation Committees) into the CPPD, increasing the number of CPPD members (change in the CPPD Bylaws);
5. Eliminate the need for approvals by the AU's Board of Directors in the process, removing the AC (Academic Committee) approval minutes from the list of documents required for advancement;
6. Define new deadlines for reviewing the process, taking into account the activities of each responsible department; and,
7. Define the exclusive responsibilities of the professor during the process, as well as of the other departments involved in the process.

Continuous flow was introduced based on the third and fourth fundamental principles of Womack and Jones (2004), promoting greater fluidity in processing activities. Only those which add

value to the customer were allowed, minimizing waste and overwork. Interstices and progress requests were controlled by a technical department, not by the instructors themselves. Thus, by adapting the process flow and reducing the number of processing instances, it became possible to process only the necessary progress, delivering the service at the exact moment the professor needs it, neither before nor after, just like in pull production.

By implementing the improvement proposals as a test in a new value stream and comparing the value stream map results from the current state to the future state of the process (**Table 7**), a 48.49% reduction in process lead time was observed. There was a 30% reduction in the number of flow activities and a 25% reduction in the number of tasks; a 41.5% reduction in activity processing time; and a 14.2% increase in the value added rate to the process.

The future waiting times between each activity cycle time (CT) were not quantitatively determined, so the same waiting times between CTs as in the current state were repeated in the future state. This decision was made because the study was unable to determine the waiting period for each sector in the future, which requires internal management and adaptation of other routines to reduce the waiting time between activities in the progression process, making the value flow even more continuous. However, it was observed that even repeating the waiting times in the VSM, there was a 48.53% reduction in the process' TWT due to management initiatives from the LT and ST.

Table 7 - Lean Process Metrics Assessment

Metric	Current state	Future state	Evaluation
TCT (proc.)	332	194	41.5% reduction
TWT (waits)	51,697	26,604	48.53% reduction
TLT (delivery)	52,029	26,798	48.49% reduction
TAV (V.A.)	0.63%	0.72%	14.2% increase
No. Activities	21	15	30% reduction
No. Tasks	60	45	25% reduction
No. Occurrences	10	9	10% reduction

Source: Elaborated by the authors (2025)

The assessment of the differences between the current and future states (Table 3) represents the results generated by systematic analyses of the process' value stream, combined with stakeholder management. Several wastes were eliminated, such as long waits, queues, unnecessary activities, discontinuous flow, lack of standardization in operations, and lack of procedural descriptions, resulting in greater efficiency and increased value added to the process.

In line with the fifth and final principle of Womack and Jones' (2004) LT, namely to strive for perfection and continue to improve, the creation of *Kaizen* plans was proposed after implementing the future-state mapping step to pursue perfection in every detail of the process, always striving for continuous improvement in the current state. Considering that the continuous improvement procedure requires effective implementation of the process in the future state, it was not possible to apply *Kaizen* plans to the process studied within this study due to the deadline for approval of intervention proposals and the timeframe for analyzing the effects of changes in the institution's work routines.

However, as an example of a continuous improvement initiative, management of efforts and routines by each FHEI department and their respective leaders was proposed with the goal of reducing waiting times for future faculty progression by 20%, potentially resulting in a value stream with a TWT of 21,283 and a TLT of 21,477. This improvement action could result in a TAV of 0.90%, which represents a 25% increase in value added compared to the TAV of the proposed future state of this study. The theoretical axes of the analysis are presented below.

4. Theoretical axes

Regarding the axes of efficiency and optimization of results based on the analysis of the results obtained in relation to the essential theoretical axes of the study, it was found that the model used seeks to meet the expectations of the constitutional principle of efficiency and the expectations of improving public administration. It also reinforces the theoretical indications that it is essential to understand and manage processes within the organizational structure for gains in efficiency, quality, and flexibility. In terms of optimizing results, the results of this study revealed that a focus on performance and the customer enables improvement in work processes and achieving better results for the organization, as already highlighted by Crawford *et al.* (2003), Oliveira and Grohmann (2016), Salgado *et al.* (2013) and Trkman (2010).

Considering the strategic alignment axis, it was observed that there is a possibility of greater alignment of the faculty progression process with people management objectives in order to strengthen the institution's competitive resources in an environment of constant change, as highlighted by Ribeiro and Costa (2014), Hammer and Champy (1994), Oliveira (2009), and Marshall Jr. *et al.* (2012), regarding the need for innovation in organizational management and alignment between strategy and processes with the involvement of people.

In line with the commitment axis, it was found that the process management and lean thinking model involves theoretical discourses by Garcia (2015), Ribeiro and Costa (2014), and Trkman (2010), thus making involvement and commitment of senior management and the technical area essential for change to emerge and remain in transformation within the organization. Indeed, only commitment to the process-based vision and the Lean philosophy can guarantee the institution's performance, improvements, and sustainable growth.

Table 8 - Analysis of results related to the theoretical axes of the study

Theoretical axis	Result of the Proposal
Efficiency:	Understanding and management of processes within the Institution's structure meets the expectations of the constitutional principle of efficiency and improvement in public administration.
Optimizing Results:	The focus on performance and stakeholder appreciation enables improvement in work processes and achieving better results for the Institution.
Strategic Alignment:	Greater alignment of the faculty progression process with people management objectives strengthens the institution's competitiveness in an environment of constant change.
Customer Focus:	The systemic vision, always aiming to eliminate tasks and activities which do not contribute to the needs of stakeholders, values their interests by integrating

relationships with the Institution, making it more successful.
Value: The effort to understand the specific needs of stakeholders results in process management to create and deliver value to stakeholders who continue to transform alongside the organization.
Commitment The commitment of senior management and the technical department to the process-based vision and the LT philosophy can ensure the Institution's performance, improvements, and sustainable growth.
Quality The proposed process management model achieves quality delivery to stakeholders and can promote sustainability and longevity of the Institution, reducing slowness and bureaucratic activities.

Source: Elaborated by the authors (2025)

The proposed model is structured with a systemic vision in the customer focus and value axes, seeking efficiency beyond interdepartmental barriers, always with the objective of eliminating unnecessary or duplicate tasks and activities which do not contribute to the needs of stakeholders, valuing their interests in an integrated form of relationships with the Institution, seeking to be more successful, and in alignment with what was studied by Falcão Junior and Santos (2016), Machado Jr. (2009) and Freeman *et al.* (2004). The proposed model also proves to be closely related to the theoretical axis of value, as it is an initiative of effort to understand the specific needs of stakeholders, resulting in process management to create and deliver value to the end customer and other stakeholders in the same sense as highlighted by the authors Womack and Jones (2004), Rother and Shook, (2003) and Pinto (2014).

Regarding the quality axis, the proposed model seeks to achieve more consistent results and deliver quality to stakeholders, along with process management, aiming at the institution's performance, sustainability, competitiveness, and longevity, along the lines of the studies by Rossés *et al.* (2017). This model overcomes existing difficulties in public administration to improve the quality of its services, reducing delays and bureaucratic activities, as highlighted by Matias-Pereira (2010).

The analysis of the results of this study revealed that application of the principles of Lean Thinking (LT) and Stakeholder Theory (ST) in the faculty progression process of a Federal Higher Education Institution (FHEI) generated significant improvements in efficiency and added value for the stakeholders involved. These findings corroborate previous studies which highlight the relevance of these approaches in public administration.

Lean Thinking has been widely adopted to optimize administrative processes in the public sector. Recent studies show that applying LT significantly reduces waste and waiting times, promoting more efficient workflows (Radnor & Osborne, 2021). This approach is particularly useful in educational institutions, where bureaucracy can negatively impact the quality of services offered to faculty and students (Pacheco, Souza, & Lima, 2022). In the case studied, a 48.49% reduction in process lead time was observed, in line with research demonstrating the effectiveness of LT in public administration.

Furthermore, Stakeholder Theory reinforces the importance of stakeholder involvement in formulating and executing administrative processes. Freeman *et al.* (2020) highlight that organizations which prioritize stakeholder management have greater longevity and sustainable

performance. In the context of FHEIs, strategic alignment between the interests of faculty, technical staff, and institutional managers is crucial to ensuring operational fluidity and stakeholder satisfaction (Machado, Ribeiro, & Torres, 2023). In the study in question, analyses indicated that 66% of respondents believe that the current career progression process does not fully meet their expectations, reinforcing the need for reviews based on a participatory approach.

Value stream mapping (VSM) revealed that only 0.63% of total process time was actually spent on activities that add value to the end customer. This metric is similar to studies by Silva *et al.* (2023), who analyzed administrative processes at European universities and identified similar structural waste. Implementing LT-inspired adjustments enabled this rate to increase to 0.72%, reflecting improvements in the elimination of redundant tasks and workflow optimization.

Another key aspect highlighted in the study was the need for training for staff and faculty involved in the process. Studies indicate that ongoing training for internal stakeholders is one of the critical factors for the success of organizational changes based on lean management (Yadav, Jain, & Mittal, 2024). In this study, 94.9% of faculty members highlighted the importance of training to improve process transparency and efficiency, reinforcing the need for educational initiatives focused on understanding standards and procedures.

Thus, the results of this study are consistent with recent literature on the application of Lean Thinking and Stakeholder Theory in public administration, demonstrating that implementing incremental methodologies can generate substantial gains in efficiency and stakeholder satisfaction. Replicating this model in other FHEIs can contribute to building more strategic management which is responsive to stakeholder needs, promoting greater transparency and agility in administrative processes.

Final Considerations

In keeping with the objective of this study of proposing an incremental methodology for process management as an organizational intervention within the Federal University of Goiás, based on the evaluation of the faculty progression process and following its methodological procedures, a nine-step incremental methodology for process management was presented as an organizational intervention proposal for a higher education institution (FHEI). This methodology combined elements of LT and ST.

The results indicated significant improvements in the studied process fluidity, elimination of unnecessary operations and movements, and above all, a reduction in waiting times. Given that the faculty progression process at the studied FHEI has not yet been institutionally mapped, this study contributes to this formalization and to the recommendation of a new process management methodology for the FHEI. Application of the proposed process management methodology in this study demonstrated improvements in the process flow, reducing its lead time by 48.49%, and consequently adding greater value to stakeholders. This analysis is considered a robust tool for creating value for the end customer, reducing organizational waste, and leveraging the institution's strengths.

Thus, the proposed management methodology proved adequate for its purpose, presenting data demonstrating a positive impact on improving work processes in the technical area and reducing the waiting time for professors to obtain legal and financial confirmation for career advancement. This also reveals the potential for applying the methodology to other processes within the institution. However, we suggest forming and engaging a new team in the form of an Organizational Process

Coordination to systematically lead process management at the FHEI, working with FHEI managers and technical areas. Coordination for process management, linked to the FHEI Rector's Office, becomes a critical success factor for management.

Because these processes require inputs in the form of information rather than materials, as in industry, analyzing and identifying the value stream in administrative areas becomes much more complex to visualize and manage. It is worth noting the difficulty in obtaining and analyzing the research data due to the extensive documentary data sources used. Since the analysis of the process history is quite detailed, it requires the researcher's time and observation skills. Furthermore, data collection is complex when using interviews, as staff members are not always willing to reveal the true reality of their work.

In addition to its empirical contribution, this study offers a relevant theoretical contribution by integrating concepts from Lean Thinking and Stakeholder Theory into the context of public administration, more specifically in process management in FHEIs. The study broadens understanding of the applicability of these approaches in the public sector, demonstrating how they can be used to improve efficiency and deliver value to stakeholders.

The summary of the results indicates that implementing the proposed methodology resulted in a 48.49% reduction in process lead time, a 30% reduction in flow activities, and a 14.2% increase in the value-added rate. These improvements reinforce the viability of the model and its replicability in other FHEIs.

Among the study's limitations are the difficulty in accessing detailed data on wait times at certain steps of the process, as well as organizational resistance to change. For future research, we suggest exploring the impact of Lean Thinking on the organizational culture of higher education institutions (FIHEs), evaluating adoption of new technologies for process automation and expanding application of the methodology to other public administration areas. Furthermore, we recommend replicating this study in other FIHEs, comparing the results across institutions. Moreover, we suggest conducting studies on the link between the LT philosophy and organizational culture in public administration to optimize continuous improvement actions with kaizen plans. A third recommendation for future research would be to reformulate criteria for evaluating teacher performance based on ST, highlighting FIHE's concern with valuing teachers and their respective professional development for quality education.

References

Abrucio, F. L. & Loureiro, M. R. (2018). Burocracia e ordem democrática: desafios contemporâneos e experiência brasileira. Repositório do Conhecimento do IPEA. Recuperado de <http://repositorio.ipea.gov.br/handle/11058/8560>.

Albergo, F., Rella, A., Vitolla, F. and Raimo, N. (2025), "Navigating the university ecosystem: determinants of social media usage for stakeholder engagement in Italian universities", *European Journal of Innovation Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi-org.ez49.periodicos.capes.gov.br/10.1108/EJIM-10-2024-1118>

Benetti, H. P. (2010). Diretrizes para avaliar a estabilidade do fluxo de valor sob a perspectiva da mentalidade enxuta (Tese de doutorado). Escola de Engenharia, Universidade Federal do Rio Grande

do Sul. Porto Alegre, RS, Brasil. Recuperado de <https://lume.ufrgs.br/handle/10183/28931>.

Bittencourt, M. F. N., Ferreira, P. A. & Brito, M. J. de. (2017). Avaliação do processo de implementação de obras públicas em Universidades Federais: um estudo do Programa REUNI. *Revista Gestão Universitária na América Latina*, 10(1), 79-102. Recuperado de <https://periodicos.ufsc.br/index.php/gual/article/view/1983-4535.2017v10n1p79>.

Cherques, H. R. T. & Pimenta, R. C. (2014). Norma e produtividade do trabalho no setor público federal brasileiro: percepções acerca de barreiras e estratégias de superação. *Organizações & Sociedade*, 21(71), 563-580. Recuperado de <https://portalseer.ufba.br/index.php/revistaoes/article/view/9674/12890>.

Bresser-Pereira, L. C. (1998). *Reforma do Estado para a cidadania: a reforma gerencial brasileira na perspectiva internacional*. São Paulo: Editora 34; Brasília: ENAP.

Bryson, J. M. (2004). What to do when stakeholders matter: stakeholder identification and analysis techniques. *Public Management Review*, 6(1): 21–53.

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497-505. Recuperado de https://www.jstor.org/stable/257850?seq=1#metadata_info_tab_contents.

Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporations. *Academy Management Review*, 20(1), 92-117. Recuperado de https://www.jstor.org/stable/258888?seq=1#metadata_info_tab_contents.

Collis, J. & Hussey, R. (2018). *Pesquisa em Administração: um guia prático para alunos de graduação e pós-graduação*. Porto Alegre: Bookman.

Crawford, L., Costello, K., Pollack, J. & Bentley, L. (2003). Managing soft change projects in the public sector. *International Journal of Project Management*, 21, 443–448. Recuperado de <https://www.sciencedirect.com/science/article/abs/pii/S0263786302000996>.

Emenda Constitucional n. 19, de 04 de junho de 1998. (1998). Modifica o regime e dispõe sobre princípios e normas da Administração Pública, servidores e agentes políticos, controle de despesas e finanças públicas e custeio de atividades a cargo do Distrito Federal, e dá outras providências. Recuperado de http://www.planalto.gov.br/ccivil_03/Constituicao/Emendas/Emc/emc19.htm

Falcão, M. A. G., Jr. & Santos, R. N. M. de. (2016). A gestão de processos na análise das atividades de seleções públicas simplificadas: estudo de caso em uma prefeitura. *Navus Revista de Gestão e Tecnologia*, 6(2), 06-19. Recuperado de <http://navus.sc.senac.br/index.php/navus/article/view/324/278>.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman.

Freeman, R. E., Harrison, J. S., & Zyglidopoulos, S. C. (2020). Stakeholder Theory: Concepts and Strategies. Cambridge University Press.

Freeman, R. E., Wicks, A. C. & Parmar, B. (2004). Stakeholder Theory and "The Corporate Objective Revisited". *Organization Science*, 15(3), 364-369. Recuperado de <https://pubsonline.informs.org/doi/pdf/10.1287/orsc.1040.0066>

Friedman, M. (1970). The social responsibility of business is to increase its profits. *New York Times Magazine*, 13, p.17. Recuperado de <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html>

Garcia, M. J. (2015). Adoção de BPM pelas IES brasileiras: características e oportunidades de melhoria (Dissertação de mestrado). Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo. Ribeirão Preto, SP, Brasil. Recuperado de <http://www.teses.usp.br/teses/disponiveis/96/96132/tde-15122015153810/pt-br.php>

Gil, A. C. (2008). Métodos e técnicas de pesquisa social. 6. ed. São Paulo: Atlas.

Gonçalves, V. K. de A., Melo, D. R. A. de, Viana, A. L. & Medeiros, S. H. da S. (2015). Lean Office: Estudo da Aplicabilidade do Conceito em uma Universidade Pública Federal. *Revista Espacios*, 36(18), E-1.

Hammer, M. & Champy, J. (1994). Reengenharia: revolucionando a empresa em função dos clientes, da concorrência e das grandes mudanças da gerência (15a ed.). Rio de Janeiro: Campus.

Hammer, M. (2004). A Agenda: o que todos os negócios devem fazer para dominar a década. São Paulo: Actual.

Hargrave, T., & Smith, J. (2025). A Good Story but not the Whole Story: Stakeholder Theory as an Ethics of Capitalism. *Business Ethics, the Environment & Responsibility*.

Harvey, D. (1994) *Condição pós-moderna: uma pesquisa sobre as origens da mudança cultural*. 4. ed. São Paulo: Loyola.

Hays, S. W., Plagens, Gregory K. Human Resource Management best practices and globalization: the universality of common sense. *Public Organization Review: A Global Journal* 2: 327–348.

Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. (2019). *Sinopse Estatística da Educação Superior 2018*. Brasília: Autor.

Lei n. 12.772, de 28 de dezembro de 2012. (2012). Dispõe sobre a estruturação do Plano de Carreiras e Cargos de Magistério Federal.

Liker, J. K. & Meier, D. (2007). *O Modelo Toyota: manual de aplicação*. Porto Alegre: Bookman.

Machado, F. M. (2019). Gestão por processos orientada ao lean thinking e à teoria do stakeholder: estudo de caso em uma instituição federal de ensino (Dissertação de mestrado). Profiap, Faculdade de Ciências e Tecnologia, Universidade Federal de Goiás. Aparecida de Goiânia, GO, Brasil.

Machado Jr., E. V. (2009). Sinergia dos Stakeholders: um framework de gestão e responsabilidade social – estudo de caso em instituição de ensino superior brasileira (Tese de doutorado). Faculdade de Engenharia, Arquitetura e Urbanismo, Universidade Metodista de Piracicaba. Santa Bárbara d'Oeste, SP, Brasil.

Machado, P. R., Ribeiro, T. S., & Torres, M. L. (2023). Gestão estratégica e stakeholders no setor público: um modelo para instituições educacionais. *Revista Brasileira de Administração Pública*, 59(2), 45-67.

Mahajan, R., Lim, W. M., Sareen, M., Kumar, S., & Panwar, R. (2023). Stakeholder theory. *Journal of Business Research*, 166, 114104.

Marconi, M. de A. & Lakatos, E. M. (2010). *Fundamentos de metodologia científica (7a Ed)*. São Paulo: Atlas.

Marshall Jr., I., Rocha, A. V., Mota, E. B. & Quintella, O. M. (2012). *Gestão da Qualidade e Processos*. Rio de Janeiro: FGV.

Matias-Pereira, J. (2010). A governança corporativa aplicada no setor público brasileiro. *Administração Pública e Gestão Social*, 2(1), 109-134.

McAdam, R., Hazlett, S-A., Casey, C. (2005). Performance management in the UK public sector Addressing multiple stakeholder complexity. *International Journal of Public Sector Management*, 18(3): 256-273.

Nunes, D. M. & Faccio, K. (2014). Avaliação fatores chave implementação Lean Office. *Produção & Produção*, 15(4), 1-16.

Ohno, T. (1997). *Sistema Toyota de Produção: além da produção em larga escala*. Porto Alegre: Bookman.

Oliveira, R. P. (2009). A transformação da educação em mercadoria no Brasil. *Educação & Sociedade*, 30(108), 739-760.

Oliveira, J. M. de & Grohmann, M. Z. (2016). Gestão por processos: configurações em organizações públicas. *Revista Pensamento e Realidade*, 31(1), 56-81.

Osborne, D., Gaebler, T. (1992). *Reinventing government: how the entrepreneurial spirit is transforming the public sector*. Reading, MA: Addison-Wesley.

Pacheco, R. S., Souza, C. A., & Lima, F. T. (2022). Aplicação do Lean Thinking na gestão

universitária: redução de burocracias e melhoria de processos. *Gestão & Planejamento*, 23(1), 89-105.

Passos, P. M. dos, Dib, B. B., Júnior, E. V. M., de Oliveira, B. G., & Petean, G. H. (2023). Local State Capacity: an analysis of bureaucracy' professionalization level and its efection on development. *Revista De Gestão Social E Ambiental*, 17(1), 1-20.

Pinto, J. P. (2014). *Pensamento Lean: a filosofia das organizações vencedoras* (6a Ed). Lisboa: Lidel.
Radnor, Z., & Osborne, S. P. (2021). Lean: A failed theory for public services? *Public Management Review*, 23(4), 601-620.

Radnor, Z. & Walley, P. (2008). Learning to walk before we try to run: adapting lean for the public sector. *Public Money & Management*, 28(1), 13-20.

Ribeiro, T. P. & Costa, H. G. (2014). Fatores críticos de sucesso em BPM: revisão sistematizada de artigos indexados nas bases Scopus, Isi e Scielo. *Relatórios de Pesquisa em Engenharia de Produção*, 14(A20), 271-286.

Rossés, G. F., Sccott, C. R. da C., Godoy, L. P., Silva, A. F. da & Viero, C. (2017). A gestão por processos e as atividades intensivas em conhecimento: um estudo na indústria de bebidas. *Revista de Administração da UFSM*, 10(3), 386-401.

Rother, M. & Shook, J. (2003). *Aprendendo a Enxergar: mapeando o fluxo de valor para agregar valor e eliminar desperdício*. São Paulo: Lean Institute Brasil.

Salgado, C. C. de R., Aires, R. F. de F., Walter, F. & Araújo, A. G. de (2013). Contribuições à melhoria de processos organizacionais: uma avaliação empírica sob a perspectiva de mapeamento de processos em uma unidade da Universidade Federal da Paraíba. *Holos*, 29(1), 151-168.

Secchi, L. (2009). Modelos organizacionais e reformas da administração pública. *RAP*, 43(2): 347-369.

Sennett, R. (2000) *A corrosão do caráter: consequências pessoais do trabalho no novo capitalismo*. 4. ed. Rio de Janeiro: Record.

Silva, J. G. da (2014). *Gestão por processos em organizações públicas: uma análise sobre obstrutores e facilitadores do Mapeamento de Processo em Organizações Públicas* (Dissertação de mestrado). Escola Brasileira de Administração Pública e de Empresas, Fundação Getúlio Vargas, Rio de Janeiro, RJ, Brasil.

Silva, J. P., Fernandes, L. H., & Costa, A. R. (2023). Análise da eficiência administrativa em universidades europeias: um estudo baseado em Lean Thinking. *Journal of Higher Education Management*, 35(3), 123-140.

Sordi, J. O. de (2012). *Gestão por processos: uma abordagem da moderna administração* (3a ed). São Paulo: Saraiva.

Tapping, D. & Shuker, T. (2010). *Lean Office: gerenciamento do fluxo de valor para áreas administrativas*. São Paulo: Leopardo Editora.

Thiollent, M. (2018) *Metodologia da pesquisa-ação*. 18. ed. São Paulo: Cortez.

Trkman, P. (2010). The Critical success factors of business process management. *International Journal of Information Management*, 30(2), 125-134.

Tuzzo, S. A. & Braga, C. F. (2016). O processo de triangulação da pesquisa qualitativa: o metafenômeno como gênese. *Revista Pesquisa Qualitativa* 4(5), 140-158.

Vergara, S. C. (2005). *Métodos de pesquisa em administração*. São Paulo: Atlas.

Universidade Federal de Goiás. (2017). Resolução do Conselho Universitário n. 18 de 18 de agosto de 2017. Dispõe sobre normas para avaliação em relação a estágio probatório, progressão funcional, promoção, aceleração da promoção, retribuição por titulação e alteração de denominação do Professor da Carreira do Magistério Superior. Goiânia: Autor.

Universidade Federal de Goiás. (2025). Plano de Desenvolvimento Institucional da UFG: 2023-2027. Goiânia: Autor. Disponível em: <https://drive.google.com/file/d/1HaJIGWoQOSPIbe0q3g4060LnjHwRB4xd/view>. Acesso em: 13 mar. 2025.

Vieira, E. F. & Vieira, M. M. F. (2004). Funcionalidade burocrática nas universidades federais: conflito em tempos de mudança. *Revista de Administração Contemporânea*, 8(2), 181-200.

Womack, J. P. & Jones, D. T. (2004). *A mentalidade enxuta nas empresas: elimine desperdícios e crie riqueza*. Rio de Janeiro: Elsevier.

Yadav, V., Jain, R., & Mittal, M. L. (2024). Lean in higher education: A systematic review of methodologies and outcomes. *International Journal of Productivity and Performance Management*, 73(1), 15-38.

Yadav, V., Jain, R., & Mittal, M. L. (2024). Impact of Partial Lean Thinking on the Financial Performance of Small and Medium-Sized Enterprises: An Exploratory Study in a Developing Economy. *Engineering Management Journal*, 36(5), 510–522. <https://doi-org.ez49.periodicos.capes.gov.br/10.1080/10429247.2024.2331924>