



ANALYSIS OF THE INSTITUTIONAL MISSION AND CONSTITUENT STRATEGY OF THE FEDERAL INSTITUTES OF EDUCATION, SCIENCE AND TECHNOLOGY IN BRAZIL*

ANÁLISE DA MISSÃO INSTITUCIONAL E DA ESTRATÉGIA CONSTITUINTE DOS INSTITUTOS FEDERAIS DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA NO BRASIL

ANÁLISIS DE LA MISIÓN INSTITUCIONAL Y ESTRATEGIA CONSTITUTIVA DE LOS INSTITUTOS FEDERALES DE EDUCACIÓN, CIENCIA Y TECNOLOGÍA EN BRASIL

ABSTRACT

Objective. Examine the institutional mission statement and constituent strategy of the Federal Institutes of Education, Science and Technology in Brazil.

Design/method/perspective. The study is descriptive with a qualitative approach. We used the model presented by Pearce and David (1987) regarding the effectiveness of the mission model. We separated the research approach into two groups. First, we linked to hermeneutic analysis. The second group deals with the mission statement's effectiveness by identifying the elements.

Results. We evidenced the low presence of the elements recommended by Pearce and David (1987), not even reaching half of the elements defined in the model. The normative aspects are, in percentage, the most addressed.

Practical implications. There is a significant gap between what someone advocated in the Federal Institutes' mission statements and the strategy that gave rise to their creation.

Originality/value. The originality of this article lies in the selection of educational institutions analysed since there is a significant volume of studies focused on higher education institutions but not on the complete set of Federal Institutes. Another distinctive aspect of this research concerns the analysis of the alignment of the mission statements with the strategy that gave rise to the creation of the Federal Institutes, the expansion, the internalisation and the increment of professional and technological education.

Keywords: Strategic driver. Mission statement. Effectiveness. Federal Institute. Higher Education Institutions.

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RESUMO

Objetivo. Examinar a declaração de missão institucional e a estratégia constituinte dos Institutos Federais de Educação, Ciência e Tecnologia no Brasil.

Design/metodologia/abordagem. O estudo é descritivo com abordagem qualitativa. Utilizamos o modelo apresentado por Pearce e David (1987) quanto à efetividade do modelo de missão. Separamos a abordagem da pesquisa em dois grupos. Primeiro, atrelado à análise hermenêutica. O segundo grupo trata da eficácia da declaração de missão identificando os elementos.

Resultados. Constatamos a baixa presença dos elementos recomendados por Pearce e David (1987), não atingindo nem a metade dos elementos definidos no modelo. Os aspectos normativos são, em percentual, os mais abordados.

Implicações práticas. Existe uma lacuna significativa entre o que foi preconizado nas declarações de missão dos Institutos Federais e a estratégia que deu origem à sua criação.

Originalidade/valor. A originalidade deste artigo está na seleção das instituições de ensino analisadas, pois há um volume significativo de estudos voltados para instituições de ensino superior, mas não para o conjunto completo dos Institutos Federais. Outro aspecto distintivo desta pesquisa diz respeito à análise do alinhamento das missões com a estratégia que deu origem à criação dos Institutos Federais, à expansão, à interiorização e ao incremento da educação profissional e tecnológica.

Palavras-chave: Direcionador estratégico. Declaração de missão. Eficácia. Instituto Federal. Instituições de Ensino Superior.

RESUMEN

Objetivo. Examinar la misión institucional y la estrategia constitutiva de los Institutos Federales de Educación, Ciencia y Tecnología de Brasil.

Diseño/metodología/enfoque. El estudio es descriptivo con un enfoque cualitativo. Utilizamos el modelo presentado por Pearce y David (1987) con respecto a la efectividad del modelo de misión. Separamos el enfoque de investigación en dos grupos. Primero, nos vinculamos con el análisis hermenéutico. El segundo grupo se ocupa de la eficacia de la declaración de misión mediante la identificación de los elementos.

Resultados. Evidenciamos la baja presencia de los elementos recomendados por Pearce y David (1987),

no llegando ni a la mitad de los elementos definidos en el modelo. Los aspectos normativos son, en porcentaje, los **más abordados**.

Implicaciones prácticas. Existe una brecha significativa entre lo que alguien defendió en las declaraciones de misión de los Institutos Federales y la estrategia que dio lugar a su creación.

Originalidad/valor. La originalidad de este artículo radica en la selección de las instituciones educativas analizadas, ya que existe un volumen significativo de estudios enfocados en las instituciones de educación superior pero no en el conjunto completo de los Institutos Federales. Otro aspecto distintivo de esta investigación se refiere al análisis del alineamiento de las declaraciones de misión con la estrategia que dio origen a la creación de los Institutos Federales, la expansión, la interiorización y el incremento de la educación profesional y tecnológica.

Palabras clave: Impulsor estratégico. Estado de la misión. Eficacia. Instituto Federal. Instituciones de Educación Superior.

INTRODUCTION

The process of implementing management tools aimed at educational institutions, especially those related to elaborating the institutional mission statement, spread in the 80s (Cortés, Rivera, & Carbonell, 2022).

The Federal Network of Professional, Scientific and Technological Education is a public education system in Brazil, composed of the Federal Institutes of Education, Science and Technology (IFs). Created in 2008, through the transformation of the former Federal Centers of Technological Education (CEFETs) and Federal Technical Schools (ETFs), this network aims to expand, internalise and increase professional and technological education in the country (Pacheco, 2020).

The Federal Institutes do not merely characterise the expansion of professional and technological education but constitute new models for articulating the social-economic situation and the demands of the territory where they are located, territoriality (Pacheco, 2020). From a managerial point of view, Federal Institutes prepare their strategic plans through institutional development plans. Linked to these are the mission statement of each of the institutions. Breznik and Law (2019) mention that several studies investigate companies' mission statements. The authors indicate little knowledge about educational institutions' mission statements and strategies.



Mussoi, Lunkes, and da Silva (2011) point out that, if properly prepared, the mission can bring numerous benefits to the institution. The authors mention the sense of direction and engagement of people who belong to the institution. They also warn that a poorly prepared mission can harm and denigrate the organisation's image with its employees and the community in which they act.

With a longer trajectory of existence than the Federal Institutes, according to the reports of the study by Araújo, Michelon, and Lunkes (2018), the national institutions of higher education, for the most part, have already incorporated the development of their strategic plans and institutional missions.

It is possible to observe, after reviewing the literature, that there is a consistent volume of studies that analyse in different contexts the mission statement of higher education institutions, public and private, both nationally and internationally. However, when the scope is educational institutions in a national context, the studies that deal with the mission statement do not have the same emphasis on Federal Institutes.

From the point of view of strategic management, federal managers, even if they belong to different ideological currents, consider the role of Federal Institutes to be paramount concerning public education policies and the training of professional labour, according to publications on the website of the Ministry of Education.

According to Pacheco (2020, p.7), the Federal Institutes "is an unprecedented institutionality in our educational structure, original in the sense that it is not inspired by any national or foreign model [...]". From a legal perspective, according to the same author, Federal Institutes are at the same level as universities, however breaking with the university/technical school matrix, which establishes a hierarchy of knowledge linked to the hierarchy of social classes: University for privileged classes and strata, and technical school for workers. Therefore, it is neither University nor Technical School but another unprecedented institutionality.

Unlike what has someone explored in other studies that address the strategic management of higher education institutions, Federal Institutions have peculiarities, as explained by Pacheco (2020), which deserve a specific study and are not merged with other institutions that exclusively offer higher education and graduate studies. We searched the Ebsco, ScienceDirect, Capes and Scielo databases without time cuts, and the titles and abstracts were analysed using the terms: Federal Institute; Mission; Corporate

Mission; Effectiveness; Strategy. As a result, it confirms the statement that no specific study concatenates the analysis of the effectiveness of institutional missions and the complete set of Federal Institutes at the national level.

Due to this gap, this article seeks to detect how the Federal Institutes of Education, Science and Technology use mission statements as strategy drivers. We used the model proposed by Pearce and David (1987) to measure the effectiveness of the mission model,

We segmented this research into a theoretical framework, methodology, findings, and final considerations. The theoretical basis is divided into topics for a better understanding of the theme, presenting the institutional mission statement, the model used to evaluate the effectiveness, and a brief review of studies that relate educational institutions and the institutional mission.

We structure the study into five sections in addition to the introduction. The next section presents the literature review. Then, we present the research methodology. The fourth section presents the presentation and analysis of the results, and the last section presents the final considerations of the study and recommendations for future studies.

THEORETICAL REFERENCE

Institutional Mission Statement

Strategic management is present in both the private sector and public institutions. The incorporation of strategic management is focused on the need for information integration and support in decision-making by organisations' managers. After analysing the internal and external environments, it is up to senior management to define the strategies he/she formalised through its mission statement (Kalkan, Bozkurt, Oztop, & Cesmeli, 2015). Simons (2000) adds that smaller institutions can communicate their core values informally, while larger organisations must formalise.

Mussoi, Lunkes, and da Silva (2011) argue that a detailed understanding of the institutional mission is essential to make it efficient and capable of fulfilling its role in strategic planning. According to Martins, Diehl, and Brunozi Júnior (2018), clarity in the mission statement is crucial for good strategic management of an organization. Simons (1995) expands on this by defining the mission as a set of organizational definitions explicitly communicated and reinforced by senior managers to establish basic values, purpose,



and direction. For Mussoi, Lunkes, and da Silva (2011, p. 364), the institutional mission must describe "its market and its technology in a way that reflects its values and priorities guiding its strategic decisions". The joint analysis of the cited authors points to the critical importance of a clear and well-communicated institutional mission, essential to effectively guide an organization's decisions and strategies.

The institutional mission is a key element of strategic planning. In some situations, they relegate the mission to the background without managers giving them due attention. Such a situation leads to the absence of creation or inadequate dissemination of the institutional mission (Mussoi, Lunkes, & Da Silva, 2011).

Analysing the implications of the mission for management, Freitas, Espindola, Lunkes, & Pfitscher (2019, p. 103) describe that "it is not enough to have a mission statement so that strategic management can enjoy its benefits, but the institutional mission must be built consistently and clearly". For Diehl (2004, p. 111), the mission is linked to the commitment of individuals since "commitment will be greater if the values and purposes disseminated by the organisation allow individuals to believe in them. The belief system is inspirational and should be broad enough to allow people from different organisational situations to identify with it".

Concatenating the teachings of the authors presented, it is possible to indicate that the mission statement promotes significant impacts on institutions. Therefore, there is a need to analyse the mission as a concrete tool that structures the strategic management of the institution. At this point, it is important to evaluate the effectiveness of the institutional mission, which we addressed in the next topic.

Mission Statement Effectiveness Assessment Template

It is necessary to seek a construct that provides a comprehensive metric for measuring the information contained in the statements to evaluate the effectiveness of institutional mission statements,

Among the models developed to evaluate the effectiveness of institutional mission statements, the one developed by Pearce and David (1987) is used repeatedly in academic research, according to the volume of citations of the work. Someone must highlight the tool's range of elements, making it one of the most complete. For Pearce and David (1987), the institutional mission is the public component of the strategy, so it has to be broad enough to encompass

organisational aspirations. The authors suggest eight key components to the mission statement in their study. They described in the work of Pearce and David (1987, p. 109, our translation):

1. The specification of customers and target markets.
2. The identification of the main products/services.
3. The geographic domain specification.
4. The identification of core technologies.
5. The expression of commitment to survival, growth and profitability.
6. The specification of key elements in the company's philosophy.
7. The identification of the company's self-concept.
8. Identifying the company's desired public image.

After defining the model for evaluating the effectiveness of the institutional mission statements, we present studies that associate educational institutions and the institutional mission.

Studies That Relate Teaching Institutions And The Institutional Mission

We searched the academic literature for research that linked the theme of institutional mission and educational institutions. The time cut was from 2014 to 2022. The searched databases were Ebsco, ScienceDirect and Capes. There is no intention to present an exhaustive study but one that can expose a broad context of the research linked to the content of this article.

It was possible to verify a range of studies that associate educational institutions with the institutional mission, either nationally or internationally. Ivey, Oliver and Henry (2014) presented a study that has the Technological University of Jamaica as its context. The authors propose a framework of metrics to assess the impact of scientific research and its correlation with the institutional mission.

In research by Lopez and Martin (2018), they examined the relationship between the mission statements of several universities and their sustainability practices. With a sample of 347 universities, the research findings indicate that the greater the number



of specific terms used in the institutional mission, the more likely universities are to obtain higher sustainability rankings.

The study by Araújo, Michelon and Lunkes (2018) analyses the elements present in the missions of Brazilian public universities. The study sample included 70 universities. We found that most investigated universities have only two of the eight elements proposed in Pearce's model.

Cortés (2018) analysed 248 institutional mission statements worldwide to identify aspects associated with the location. One of the most important findings of the research concerns public universities directing greater focus on students, unlike private universities that centre their discourse on education as a whole.

Seeber, Barberio, Huisman, & Mampaey, J. (2019) examine factors that affect the content of UK universities' institutional mission statements. They present the main result that universities opt for statements aimed at the external public and the convictions of the members of the institutions.

Deus, Battistelle, and da Silva (2016) focusing on sustainability, examined the institutional mission of 30 Brazilian universities. The study investigated institutional mission statements based on a sustainability model. The research shows that less than ten per cent of educational institutions present a reasonable level regarding aspects related to sustainability in their mission statements (five points out of a maximum of nine).

The research by Breznik and Law (2019) performs a content analysis of the mission statements of the 250 largest universities in the world. According to the authors, the results show four central dimensions in the universities' mission statements: the philosophy of education, strategic orientation, social responsibility and values for shareholders.

Cortés, Rivera, and Carbonell (2022) investigated the content of institutional missions and correlated them with the performance of several universities. The authors did not detect a significant difference for the analysed items: research type, size and educational focus. The research by Haberkamp, Hoppen and Diehl (2018) seeks to recognise how Brazilian higher education institutions in the Rio Grande do Sul use organisational mission statements as strategy drivers. We should mention that the study by Haberkamp, Hoppen and Diehl (2018) includes three Federal Institutes but not all of them.

Based on the studies above, it is possible to observe that the focus of research falls on higher ed-

ucation institutions, whether public or private, both internationally and nationally. Again, it is necessary to emphasise that the research focused on the study of the institutional strategy and mission does not fully contemplate the Federal Institutes of Education, Science and Technology.

METHODOLOGICAL PROCEDURES

This study aims to identify how the Federal Institutes of Education, Science and Technology use mission statements as strategy drivers. As defined in their constitution, the Federal Institutes have as their central strategy the expansion, internalisation and increment of professional and technological education in the country. This research assumes a descriptive character since it observes and analyses the mission statements of the Federal Institutes to evaluate them as a tool to support the direction of the strategy.

The national education network had 38 Federal Institutes throughout the national territory, according to more recent data from the website of the Ministry of Education. This research describes the characteristics of a population, as it consists of analysing the mission of the Federal Institutes, so it is a survey.

We visited all Federal Institutes' websites and transcribed their institutional mission statements. We characterised the collected data as secondary data. The institutional mission statements are analysed from the perspective of the model by Pearce and David (1987) with a focus on the educational context outlined by Haberkamp, Hoppen and Diehl (2018)

Based on Haberkamp, Hoppen and Diehl (2018), we included two new elements: graduates' profiles and the educational institution's contributions to the community/region. According to the authors, this addition is a reflection of the high number of words in the analysed mission statements. From the perspective of Pearce and David (1987), a mission statement is effective when all the elements described in the model are verified.

We performed analysis using word cloud and text mining techniques. In this context, there was a need to use the Iramuteq software, both for the classifications and for the hermeneutic analysis. Iramuteq is an open-source software developed in Python, which performs statistical analysis of texts.

We have limitations; this research analyses the mission statements of all Brazilian Federal Institutes of Education, Science and Technology on the date of this research. The entire federal education network,



for instance, federal universities, is not the object of study.

Table 1
Elements searched

	Elements of Effectiveness	Description
Elements of the model proposed by Pearce and David (1987)	Services offered	Specified services (undergraduate and graduate programs, executive education, theological training, etc.) and generic services (education, teaching, etc.)
	Market or consumers	To whom the service is intended (institute members, people, community, etc.)
	Technology	Infrastructure, information and communication technology used to facilitate the teaching-learning process.
	Growth, survival and profitability	Specify how Higher Education Institutions intend to grow and achieve profitability, investor relations (sustainability, customer satisfaction, etc.) and information on tuition fees.
	Philosophy	Definition of objectives, beliefs and priority values (training conscious citizens, educating for work, etc.)
	Desired public image	Identification of how Higher Education Institutions would like to be and be seen.
	Self-concept	Adjectives that describe institutions and the services they provide (e.g. quality, excellence, etc.).
	Geographic domain	Where Higher Education Institutions operate.

Additional Elements - Haberkamp, Hoppen and Diehl (2018)	Profile of graduates	Identifies characteristics, skills, abilities and knowledge expected from the student.
	Contributions of the educational institution in the community/region	Identifying actions, projects and positive impacts that the institution promotes locally, aiming at social development.

Source: Pearce and David (1987) and Haberkamp, Hoppen and Diehl (2018)

Haberkamp, Hoppen and Diehl (2018) state that “the subjectivity inherent in the coding process should be considered a limitation. Thus, even using the same data, other researchers may obtain different results from those presented here”. Similarly, the same limitation is also present in this research.

PRESENTATION AND ANALYSIS OF RESULTS

We segregated the findings of the research are in two groups. The first linked to the hermeneutic analysis, where we found the most used terms in the mission statements. The second group deals with the effectiveness of the mission statement, with the identification of elements, according to the mission statement analysis model.

Hermeneutical Analysis Of The Mission Statements Of The Federal Institutes

One of the attributes evaluated in this research was the extent of the Federal Institutes’ mission statements. According to Bart (2006), there is no explicit rule about the number of words that must appear in a mission statement; however, a fluctuation between 60 and 80 words is appropriate. The author did not recommend that the statement be too short or excessively lengthy.

Contrary to the teachings of Bart (2006), this study detected the smallest statement containing nine words. If someone excludes articles and prepositions, the number reduces to 6. In the same gap, the average number of words in the statements also does not reach the minimum described and is restricted to an



average of 27 words.

As words with less than three letters, articles and prepositions were suppressed, through frequency analysis, we found 1,093 words. Figure 1 presents the frequency of words attributed to the mission statements of the 38 federal institutes analysed. The larger the word size, the greater its occurrence.

Figure 1

Word cloud based on mission statements



Source: Prepared by the authors.

The most frequent word was education, with 31 occurrences. Subsequently, the words mentioned are development, promote, professional, teaching and formation, respectively, 29, 27, 25, 23 and 23 times.

Correlating this research with other studies, we observed that the words development and formation are referenced among those with the highest incidence in the study by Haberkamp, Hoppen and Diehl (2018). Observing the cloud of words prepared by the authors, even in lesser frequency, the most famous words in this study (promote, education, teaching and professional) have a proportion highlighted by their incidence. The study by Breznik and Law (2019) identifies the words research and educate as occurring in more than half of the mission statements.

Haberkamp, Hoppen, and Diehl's (2018) research studied higher education institutions in Rio Grande do Sul. Even though the same institutions were not studied, with different educational approaches, it is possible to indicate a similarity in the words used in the mission statements.

Effectiveness Of Federal Institutes' Mission Statements

Taking the model proposed by Pearce and David (1987) as a parameter, we analysed the mission statements of all Federal Institutes. We show the effectiveness elements found in the statements and the number of occurrences in Table 2.

Table 2

Frequency of effectiveness elements in mission statements

Element	Occurrences	Percentage (%)
Services offered	37	97.4%
Philosophy	27	71.1%
Self-concept	15	39.5%
Geographic domain	15	39.5%
Growth, survival and profitability	10	26.3%
Market/consumers	6	15.8%
Desired public image	5	13.2%
Technology	1	2.6%

Source: Prepared by authors.

We already observed a relevant finding in the first element, services offered. Of all the Federal Institutes analysed, only one did not show the services provided in its mission statement, resulting in a % of incidences of 97.4%. This result is close to the study by Haberkamp, Hoppen and Diehl (2018) analysed the three Federal Institutes in the State of Rio Grande do Sul. They found a percentage of 100% of incidence in the mission statements on the element services offered. Comprehensively, including not only the Federal Institutes, the same authors found only 42 incidences in 91 mission statements searched. The finding of this research is in line with that found by Forte and Pereira (2003), which indicates that the services offered are among the most frequent elements.

The market and consumers element had only six occurrences (15.8%). Of the few occurrences, generic names were found, such as, for example, community. Compared to the studies by Haberkamp, Hoppen and Diehl (2018) and Araújo, Michelin and Lunkes (2018), which found, respectively, 24% and 34%, there is less emphasis on this element in the



declarations of the Federal Institutes.

Technology was the least mentioned element, with only one occurrence (2.6%). After reporting a negligible incidence of this element, Haberkamp, Hoppen and Diehl (2018) state that institutions do not see technology as a strategic resource with the potential to leverage their competitiveness but only as a mere support tool. Araújo, Michelon and Lunkes (2018) present a higher percentage for the element, 23%. Even so, they describe that "it is the low attention given by universities to the technology element". In addition, the same authors state that universities "do not focus on exploring the technological potential, in an environment where it should be fundamental, to improve or enhance the development techniques of different areas of knowledge".

We observed ten incidences for the element growth, survival and profitability (26.3%). As public institutions supported by the federal government, the Federal Institutes do not focus on profitability but on the other items of the element. Haberkamp, Hoppen and Diehl (2018) showed an average presence of only 8% of the analysed higher education institutions. The same authors, against the mentioned percentage, indicate that two of the three Federal Institutes researched to deal with growth, survival and profitability.

We identified 27 occurrences regarding the philosophy element, 71.1%. The finding is in line with other studies, such as that of Pearce and David (1987), which found 75%, and Haberkamp, Hoppen and Diehl (2018), which detected a percentage of 74%. On the contrary, Araújo, Michelon and Lunkes (2018) found only 31% for the element. The philosophy element found in the statements is in line with the characteristics of the institution, such as, for example, "Provide professional, scientific and technological, inclusive, public, free and quality education, promoting the full training of citizens [...]", or "Promote inclusion and form citizens, through professional, scientific and technological education, generating, disseminating and applying knowledge and innovation".

As for the desired public image element, we found only five occurrences, 13.2%. The index found in this research is below that reported by Mussoi, Lunkes and Silva (2011), who obtained 30% for the element, by Gonzaga (2015), who identified 42% and by Araújo, Michelon and Lunkes (2018) which shows 23%. Araújo, Michelon and Lunkes (2018, p. 125) state, "Brazilian public universities, in general, do not pay much attention to the external environment, as they do not spread the organisation's public image". As verified by the percentage obtained in this research,

we extended the author's statement to the Federal Institutes.

The geographic domain was found in 15 occurrences in the declarations of the Federal Institutes (39.5%). We linked the element to the predominantly regional performance. Haberkamp, Hoppen and Diehl (2018) point out as being the community where the institution operates. Some of the expressions found to categorise it as a geographic domain are more generic, such as "southern region"; however, there are others with greater specificity, such as the excerpt from one of the statements analysed "[...] from the northwest, north and coastal lowlands of the state of Rio de Janeiro". Comparatively, regarding the geographic domain element, research by Araújo, Michelon and Lunkes (2018) detected 30%, and Haberkamp, Hoppen and Diehl (2018) found 16%. The percentages mentioned are notably lower than those found in the mission statements of the Federal Institutes analysed in this research.

Addressing Normative Issues And Additions To The Pearce And David Model (1987)

In their research, Haberkamp, Hoppen and Diehl (2018) noted new elements frequently appearing in the analysed mission statements. As described by the researchers, turning to the perspective of educational institutions, two important elements could compose Pearce and David's (1987) model: the graduate's profile and the institution's contribution to the community/region.

After analysing the normative basis by Haberkamp, Hoppen and Diehl (2018) clarified that the two new elements come from a normative requirement, the Brazilian Law of Guidelines and Bases (Law 9.394/96). The authors mention that the goals imposed in the referred legislation give rise to the formation of new elements to be analysed.

Seeking to draw a parallel with the research by Haberkamp, Hoppen and Diehl (2018), Table 3 was constructed, which describes, by region, the occurrence of the two new elements in the mission statements of the Federal Institutes.

**Table 3***Occurrences of the new elements by region*

Normative Aspects (new elements)	Region Occurrence (%)					Overall percentage (%)
	South	Northeast	North	Southeast	Central- West	
Graduate Profile	100.0%	54.5%	14.3%	44.4%	40.0%	50%
Contributions of the educational institution to the community/region	100.0%	81.8%	100.0%	100.0%	80.0%	92%

Source: Prepared by the authors.

As seen in Table 3, there is clear compliance with the regulations regarding the contribution of the educational institution to the community/region. For this item, the overall percentage is 92%. Someone should note that all Federal Institutes in the South, North and Southeast regions present the element in their mission statements (100%).

The graduate profile element did not present a similar occurrence. Only 50% of the Federal Institutes analysed portray it. According to Table 3, the discrepancy between the occurrence of the element in the Federal Institutes located in the South Region and in the North Region, respectively, 100% and 14.3%, is evident.

From the mission statements, some examples related to the profile of the graduate were collected, such as "[...] aiming at the full training of critical citizens, entrepreneurs, committed to sustainability", "[...] forming critical, creative citizens, competent and humanistic", "[...] focusing on training citizens committed to human, economic, cultural and social development" and "[...] training humanistic and innovative

professionals".

Seeking a comparison, the study by Haberkamp, Hoppen and Diehl (2018) presented a percentage of 53% for the element profiles of graduates and 32% for the element contribution of the institution to the community/region. The percentage found for the graduate profile element is similar to the findings of this research; however, there is significant variation in the occurrences of the second element: contributions from the educational institution to the community/region, 32% in the authors' research and 92% in this research.

Alignment Of The Mission Statements With The Strategy That Gave Rise To The Creation Of The Federal Institutes

The strategy that gave rise to the creation of the Federal Institutes explained in Federal Law No. 11,892/2008, advocates the precepts of expansion, internalisation and increment of professional and technological education as fundamental.

Table 4*Aligning with the constitution strategy of the Federal Institutes*

Strategic origin of the creation of the Federal Institutes	Region Occurrence (%)					Overall per- centage (%)
	South	Northeast	North	Southeast	Central- West	
Expansion, internalisation and increment of professional and technological education	83.3%	45.5%	57.1%	77.8%	40.0%	60.5%

Source: Prepared by the authors.



Table 4 shows that 60.5% of the Federal Institutes' evidence in their mission statements aligns with the normative of their formation. There is a greater compass with the strategic core in the declarations of the Federal Institutes located in the South and South-

east Regions. At the same time, it is possible to observe room for greater alignment in the mission statements of the other regions.

Table 5
Consolidation of data analysed by region

	Region				
	South	Northeast	North	Southeast	Central-West
Services offered	100.0%	90.9%	100.0%	100.0%	100.0%
Market/consumers	33.3%	9.1%	14.3%	22.2%	0.0%
Technology	0.0%	0.0%	0.0%	0.0%	20.0%
Growth, survival and profitability	66.7%	27.3%	14.3%	11.1%	20.0%
Philosophy	66.7%	63.6%	85.7%	77.8%	60.0%
	Region				
	South	Northeast	North	Southeast	Central-West
Desired public image	16.7%	9.1%	14.3%	11.1%	20.0%
Self-concept	33.3%	36.4%	42.9%	44.4%	40.0%
Geographic domain	50.0%	27.3%	57.1%	44.4%	20.0%
Average - the presence of elements of Pearce and David (1987)	45.8%	33.0%	41.1%	38.9%	35.0%
	Region				
	South	Northeast	North	Southeast	Central-West
Graduate Profile	100.0%	54.5%	14.3%	44.4%	40.0%
Contributions of the educational institution to the community	100.0%	81.8%	100.0%	100.0%	80.0%
Average - Normative Aspects	100.0%	68.2%	57.1%	72.2%	60.0%
Expansion, internalisation and increment of professional and technological education	83.3%	45.5%	57.1%	77.8%	40.0%
Adherence to the constitutional strategy of the Federal Institutes	83.3%	45.5%	57.1%	77.8%	40.0%
Overall average per region	59.1%	40.5%	45.5%	48.5%	40.0%

Source: Prepared by the authors.

We extracted examples that deal with inter-orientation from the mission statements as "[...] aligned with the regionalities in which it is inserted" and "[...] in line with territorial potentialities and vocations." As for the expansion and increment of technical and technological education, it can be mentioned, for example, the fragments "[...] promoting education at all levels and categories of teaching", "[...] teaching at all

levels and categories", "[...] provision of basic, technical and technological education" and "[...] in the various areas of technical and technological knowledge".

In Table 5, it is possible to observe the low presence of the elements advocated by Pearce and David (1987). Since the mission statements of the Northeastern Federal Institutes have, on average, the lowest number of elements (33%) and those of the



South Region have the highest percentage (45.8%). No region reaches even half of the elements defined by Pearce and David (1987).

Based on the general averages per region, presented in Table 5, one can see that there is a significant gap between what we described in the institutional mission statements of the Federal Institutes, the elements proposed by Pearce and David (1987), normative aspects and linkage to the strategic constitution of the Federal Institutes. Even though regulatory aspects are, in percentage, the most attended, there is still room for improvement in almost all regions.

Previous research, such as Forte and Pereira (2003) and Ellis and Miller (2014), pointed out that mission statements do not work as drivers of the strategy of educational institutions. Similarly, Haberkamp, Hoppen and Diehl (2018) conclude that, due to the low number of elements and information found, the institutional mission statements of the analysed educational institutions do not fit together as a strategic tool. This research, based on the data presented, agrees with the findings of other studies by stating that the studied mission statements do not fully achieve their objectives in terms of acting as strategy drivers.

FINAL CONSIDERATIONS

This research aimed to identify how the Federal Institutes of Education, Science and Technology use mission statements as strategy drivers. We used the model presented by Pearce and David (1987) regarding the effectiveness of the mission model. The study aimed to detect how the Federal Institutes of Education, Science, and Technology used mission statements as strategy drivers. The adopted evaluation metric was the model proposed by Pearce and David (1987).

We analysed the mission statements of all Federal Institutes of Education, Science and Technology nationwide, 38 on the date of this research. All Federal Institutes have published their mission statements on their websites.

We segmented the data into the South, Northeast, North, Southeast and Midwest regions aiming at a more detailed analysis. It was possible to verify that none of the Federal Institutes presented in its mission statement the eight elements established by Pearce and David (1987). Notably, the mission statements of the Northeastern Federal Institutes have, on average, the lowest number of elements (33%) and those of the South Region the highest percentage (45.8%).

From the model's perspective by Pearce and

David (1987), none of the Federal Institutes presented an effective mission. Araújo, Michelon and Lunkes (2018, p. 11) warn that public universities "[...] develop the mission statement to adapt to their structure or to comply with the Institutional Development Plan, determined by the Ministry of Education". It is possible to indicate that the mission statements of the Federal Institutes, exceptions already explained, can be improved in compliance with normative aspects.

Although all Federal Institutes present their mission statements, on average, they present a low percentage of elements recommended in the model by Pearce and David (1987). We observed a gap between the mission statements of the Federal Institutes and the strategy that gave rise to their creation: the expansion, internalisation and increment of professional and technological education. Additionally, this research opens the possibility of analyzing other situations, such as the outdated nature or lack of renewal of the IFs' mission statements. It suggests the need for periodic updates to these mission statements to ensure that they remain aligned with the dynamic educational landscape and the evolving strategic goals of the Federal Institutes. Regularly revising and updating these mission statements could potentially bridge the observed gap between the current missions and the original strategic intentions for the expansion and development of these institutions.

Future research can explore more deeply the interconnection between the mission, vision and organizational values of Federal Institutes and their institutional results, such as the General Course Index (IGC), which measures the quality of courses. Additionally, possible differences in the structures of the institutional statements of Federal Institutes could be investigated in comparison with other federal public Educational Institutions, in order to identify significant patterns or discrepancies that could influence their strategies and performances.

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