

ANALYSIS OF THE INNOVATION CULTURE AT A PUBLIC
UNIVERSITY

ANÁLISE DA CULTURA DE INOVAÇÃO EM UMA UNIVERSIDADE
PÚBLICA

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ABSTRACT

The innovation culture refers to a set of values and practices within an organization that foster creativity, the pursuit of new ideas, continuous learning, and mutual support among employees, always aiming to improve the services offered. This study aimed to measure the level of innovation culture in a state public university, based on the perception of the technical-administrative staff. The research was based on quantitative analysis, using the survey technique, with a closed-ended questionnaire for data collection. The sample consisted of 107 public employees, and the data were analyzed using descriptive statistical analysis and measures of central tendency. The results indicated that the innovation culture is more easily associated with innovation strategies related to the university's external environment, such as performance during extension activities. However, regarding internal aspects, these need attention for improvement in administrative practices.

Keywords: Innovation culture; Organizational culture; Public university; Public management.

RESUMO

A cultura de inovação refere-se a um conjunto de valores e práticas dentro de uma organização que promovem a criatividade, a busca por novas ideias, o aprendizado

contínuo e o apoio entre os colaboradores, visando sempre melhorar os serviços oferecidos. Este estudo buscou mensurar o nível de cultura de inovação em uma universidade pública estadual, a partir da percepção do corpo técnico-administrativo. A pesquisa baseou-se em análise quantitativa, pela técnica de levantamento (*survey*), com questionário fechado para coleta de dados. A amostra foi de 107 servidores públicos e os dados foram analisados usando análise estatística descritiva e medida de tendência central. Os resultados indicaram que a cultura de inovação é associada, mais facilmente, por meio das estratégias de inovação relacionadas ao ambiente externo da universidade, como no desempenho durante atividades de extensão, porém quanto aos aspectos internos, estes precisam de atenção para melhoria em práticas administrativas.

Palavras-chave: Cultura de inovação; Cultura organizacional; Universidade pública; Gestão Pública.

1 INTRODUCTION

In light of university-industry interactions, technology transfer, startups, incubators, laboratories, technology parks, and research centers, the context of innovation has become institutionalized in universities (KRISHNA, 2019). Within universities, the culture of innovation is encouraged, as individuals are constantly involved in innovative processes, and it is common for collaborators to suggest improvements and rethink procedures within these institutions (TORRES; ARAUJO, 2019, p. 10).

In the Brazilian public context, the government recognized the importance of the Culture of Innovation in Scientific, Technological, and Innovation Institutions by declaring in Law No. 13,243 of January 11, 2016, that they should possess among their principles "the encouragement of the creation of environments conducive to innovation" (BRASIL, 2016, Art. 2, VIII). Moreover, the Governance and Management model, which strengthens administrative maturation in public bodies, treats the culture of innovation as one of the characteristics of contemporary management (BRASIL, 2021).

The COVID-19 pandemic in 2020 required institutions, especially public bodies providing essential services, to review their political-structural systems to avoid compromising their capacity to respond at an intraorganizational level, primarily formed by the support area, whether in process design, state flexibility, logistical and operational rearrangements, communication strategies, among others (COELHO et



al., 2020). Therefore, this flexibility in reinventing oneself is acknowledged as a necessity.

Furthermore, it is observed that the Culture of Innovation is studied worldwide due to its strong connection with organizational performance and market competitiveness (BRUNO-FARIA; FONSECA, 2014a). Regarding the university environment, the culture of innovation is researched in the pedagogical aspect or educational policy in undergraduate courses (ALONSO SÁEZ, 2019; SAWHNEY et al., 2021; ARIAS; MORALES, 2022; BEVENUTO, 2021; FARIA; PESSANHA, 2022; GADEA; MARA, 2022). Besides this bias, there is the relationship between its capacity for innovation and technology (GORZELANY, 2021; ARRABAL et al., 2022), the evaluation of integrated information systems, and the context of remote teaching (MARTINS; CRISTINA, 2022; CAMARGO; KÜHL, 2022), in specific departments such as libraries (LAZZARI et al., 2021; SAVEDRA et al., 2021; CABRAL, 2022) and in propositions of innovation from the perspective of university students (HALL, 2021). As for public bodies, in a systematic review presented by Sena et al. (2024), the Culture of Innovation was explored in different institutions, but it was not observed from the perspective of the administrative staff in universities.

Thus, this study aimed to examine how the administrative staff at the State University of Mato Grosso do Sul perceive and relate to the Culture of Innovation. The scarcity of national research on this interaction in public universities also justifies this work.

The article is structured as follows: the justification and objectives of this study are presented in this introduction; subsequently, the theoretical framework is presented to familiarize the reader with the theme of the Culture of Innovation. Next, the methodology developed for carrying out the work is presented. In the Discussion section, the results achieved are exposed, and finally, the concluding remarks on the findings are provided.

2 THEORETICAL FRAMEWORK

2.1 ORGANIZATIONAL CULTURE

Theoretical aspects began focusing on organizational culture at the end of the 1970s. Economically contextualizing, the investigation by organizational researchers was encouraged by the identification of elements that valued altruistic formation in the environment of Eastern factories, aiming at reducing production costs and the idea of total quality, given the consequences of World War II (MACHADO et al., 2016).

It is perceived that culture arises from the construction of a symbolic universe, mechanisms of legitimation, and primary and secondary socialization (FLEURY, 1996). Particularly, organizational culture is understood similarly to the layers of an onion, moving from the outermost to the innermost layers, or from the most practical to the intangible. These layers include four terms: symbols, heroes, rituals, and values (HOFSTEDE, 2012).

In a more "visible" way, symbols are evidenced through language, gestures, clothing, and objects that carry a specific meaning. Heroes are those who represent the essence of the organization, whether alive or not, real or not, and are associated with defining characteristics. Rituals are activities irrelevant to a specific end but essential because they are imbued with meaning in the accomplishment of the activity, making sense on their own, such as ceremonies. Values are contrasting feelings that encompass the decent versus the indecent and are unconsciously present in people's actions (HOFSTEDE, 2012).

Organizational culture emerged as a form of consensus and solidarity among the organization's employees (FREITAS, 1991). Over time, the homogeneity of behavior linked organizational culture with the attempt to simplify management by minimizing inputs and maximizing results, with the purpose of widening profit margins. In public organizations, which do not aim for profit, the management of organizational culture contributes to efficiently meeting society's demands (MARQUES et al., 2020).

Organizational culture established itself as a functional approach for one of the forms of monitoring and control belonging to the capitalist structure, potentially sustaining itself as a competitive advantage (MACHADO et al., 2016).

2.2 INNOVATION CULTURE

The context of innovation in productive companies is an invention that economically alters the commercial transaction of wealth generation (SCHUMPETER, 1961). Thus, over time, consumers are encouraged by these companies to no longer accept what was once normal consumption, as there are more up-to-date solutions in



the market, thereby allowing new ideas to replace old ones. This Schumpeterian phenomenon, known as "creative destruction," is easily perceived from the perspective of the private sector. Innovation itself is not consolidated in an isolated episode, as its implementation requires a manageable process within an atmosphere that fosters this innovative spirit. Tidd, Bessant, and Pavitt (2008) present ten components that characterize the innovative environment of organizations, which are: vision and leadership for innovation (1), appropriate organizational structure (2), key roles for innovation within the organization (3), training (4), people involvement (5), team formation for innovation (6), creative climate (7), external focus (8), multidirectional and multi-channel communication (9), and organizational learning capacity (10). These aspects help the organization remain constantly adaptable to market demands.

To understand what constitutes an innovation culture, a search was conducted in scientific databases such as Spell, Scopus, and Capes Periodicals, using terms like "cultura de inovação," "innovation culture," and "culture of innovation." It is congruent to perceive that innovation culture can be constructed from understanding fundamental elements and deepening the collective understanding, hence involving the entire group.

It is noted that its operationalization occurs at a deeper level, as it considers not only aspects of the organizational climate, which permeate hierarchy, working conditions, and interpersonal relationships, but also values, beliefs, and other intangible elements. The identification of these elements is shared through observation and discussion with those involved, as the construction involves contradictions and brings collectively shared behavior patterns. Consequently, innovation culture is understood as a way to consolidate the field of innovation practices (PIMENTEL, 2019).

It is also highlighted that innovation culture is a fundamental element in selecting strategies that contribute to organizational competitiveness, especially by adopting eco-innovation, as in the industrial sector. It is argued that elements of the internal environment of an organization with an innovation culture can be identified in categories such as beliefs and values, structure, encouragement of innovation, and open communication. Competitiveness is addressed through the rational use of natural resources combined with economic advantage (VENDLER; MAÇANEIRO, 2018).

It is important to note that incorporating an innovation culture promotes innovation in all functional areas and often leads to radical changes. Despite knowing



that the organization may suffer negative impacts from competition, being attentive to failures and subjecting itself to risks is something expected (ADIGUZEL et al., 2022).

Recognizing the presence of elements such as creativity, flexibility, knowledge sharing, and social learning as "factors that are somehow related to innovation generated in organizations and that this fact impacts development and competitiveness" (GIMENEZ; VEIGA, 2020, p. 13).

In a review conducted from 1997 to 2012 on the concept of innovation culture, the term was classified as the relationship between organizational culture and innovation. Innovation culture is considered the environment that embraces "people's creativity and that the communication system allows the sharing of ideas, information, experiences, and values with innovation as the main focus" (BRUNO-FARIA; FONSECA, 2014b, p. 9).

Culture is not created uniquely and individually. The involvement of beliefs and customs with the collective imprints a system that reaches a co-evolved dynamic, selecting changes beneficial for the organization and society (CAMPOS-BLÁZQUEZ et al., 2020, p. 3).

It is certain that organizations that build a multidimensional context—infrastructure, behavior/influence, implementation—including the intention to be innovative, possess an innovation culture (DOBNI, 2008). Innovation culture develops organizational practices to reduce environmental degradation within environmental perspectives, aimed at sustainable development (MAÇANEIRO; VENDLER, 2021). Thus, the environment and sustainability contours are also evident in the exercise of their employees.

An organization that exercises an innovation culture is one that brings innovation into its organizational culture, not practicing it in isolation, but rather recognizing innovation as a manageable process (DIONÍSIO, 2019). Innovation culture, therefore, is embraced by the group of individuals who perform it. It is understood that "an innovation culture will only have fertile ground if there are no internal obstacles that can hinder the generation of ideas or sophisticated strategic visions" (DUTRA; ALMEIDA, 2018, p. 9).

Given the above, innovation culture is understood as the composition of visible and intangible aspects that translate into the way the team performs their work, feeling comfortable sharing creative proposals, with incremental innovation in processes,

perceived value to the user, and contributing to reinforce the organization's strategic positioning.

3 METHOD

This research followed the following methodological criteria: a quantitative approach was used, statistically accepted through sampling (MANZATO; SANTOS, 2012). This study utilized a structured closed questionnaire sent via institutional email to the participants.

Regarding the objectives, descriptive research aims to compare two or more groups, noting the characteristics, elements, and variables common to a particular process (NUNES et al., 2016).

The research technique used was the survey. The survey research technique is appropriate for quantitative descriptions of a population, using a specific research instrument to obtain answers to questions such as "how and why is this happening" or "what is happening." It also seeks to investigate the research object close to or recent to the phenomenon in question, ensuring that the best environment remains unchanged or without interference (FREITAS et al., 2000).

As for the data collection instrument, it was conducted through a questionnaire. The preparation of a questionnaire involves two stages: the first includes identifying the respondent, requesting cooperation, providing instructions, and classifying the respondent; the second involves establishing a script consistent with the research problem and objectives, hypotheses, population, and data analysis methods. Care was taken to avoid errors such as biased or ambiguous questions and failure in sample selection (CHAGAS, 2000). The instrument considered items found in the literature on organizations with an Innovation Culture, and alongside each item, the corresponding statements are presented, as shown in Chart 1.

Chart 1. Items of the data collection instrument and their references.

Code	Items [Sentence]	Theoretical basis
F1 - Factor: Innovation strategies - Culture content		
IC1	Artifacts [Esta organização valoriza a aprendizagem e experimentação de novas ideias]	Pimentel (2019)
IC2	Structure [Esta organização possui aparatos, ferramentas, softwares e/ou outras estruturas inovadoras]	Vendler e Maçaneiro (2018)

IC11	Innovation as a manageable process [Os líderes estimulam os colaboradores a reverem seus processos de trabalho a fim de aperfeçoá-los]	Striteská e Sein (2021)
IC12	Performance Management and Development System [O sistema de avaliação de desempenho funcional contempla atividades de inovação processual, incremental e outros processos de melhoria e/ou aperfeiçoamento da instituição]	Mutangabande et al. (2022)
F4 - Factor: Relationship with the external context		
EC1	Social learning [Nesta organização os servidores têm estímulo para realizar inovações com base nas demandas da sociedade]	Pimentel (2019)
EC2	Expansion of borders [Nesta organização há incentivo para mobilidade intercultural]	Yeshua-Katz e Efrat-Treister (2020)
EC3	Suggestion box [Nesta organização os cidadãos têm espaço para dar retorno de como foram atendidos]	Vendler e Maçaneiro (2018)
F5 - Factor: Results - perception of the effectiveness of innovations		
RI1	Awards, bonuses [Esta organização premia os servidores que desenvolvem inovações no seu ambiente de trabalho]	Vendler e Maçaneiro (2018)
RI2	Safe place [Nesta organização há espaço para exposição de ideias contraditórias]	Yeshua-Katz e Efrat-Treister (2020)
RI3	Reward and recognition mechanisms [Nesta organização há reconhecimento aos servidores que demonstram interesse em participar de atividades relacionadas à inovação] [Os servidores são reconhecidos pelas contribuições nos processos de inovação, nesta organização] [São valorizadas inovações desenvolvidas nesta organização que contribuem para visibilidade do servidor na sociedade]	Dutra e Almeida (2018)

Source: Prepared by the authors (2024).

This study opted to work with a convenience sample. This sampling category refers to those who are available to contribute to the process, thus being accidental and composed of members of the researched population who are accessible (FREITAG, 2018).

The questionnaire was sent to the email addresses of all employees holding the positions of Medium-Level Technical Assistant and Higher-Level Technician who were actively employed at the university, i.e., administrative staff who were not on leave, absent, or seconded to another organization. The first invitation was sent on December 13, 2023, via institutional email, and a second invitation was sent on January 15, 2024. Additionally, the questionnaire link was shared through a WhatsApp group. The questionnaire closed for responses on February 9, 2024, with a total of 107 respondents.

The evaluation of the innovation culture at the university was conducted using descriptive statistics and measures of central tendency such as mean, mode, and standard deviation (SAMPAIO; ASSUMPÇÃO; FONSECA, 2018), as presented below.



4 RESULTS AND DISCUSSION

For the analysis of respondents, the nominal data were segmented as presented in Table 1.

Table 1: Characterization of the respondent

Category	Subcategories	Frequency	Percentage
Gender	Male	39	36.4%
	Female	68	63.6%
	Post doctoral	3	2.8%
Education	Doctorate degree	9	8.4%
	Master's degree	29	27.1%
	Postgraduate diplomas or specialist certificates	60	56.1%
	Bachelor's degrees	3	2.8%
	High school	3	2.8%
Age Range	Between 61 and 70 years old	1	0.9%
	Between 51 and 60 years old	8	7.5%
	Between 41 and 50 years old	47	43.9%
	Between 31 and 40 years old	43	40.2%
	Up to 30 years	8	7.5%
	Over 26	1	0.9%
	From 21 to 25 years old	18	16.8%
Length of service at UEMS	From 16 to 20 years old	18	16.8%
	From 11 to 15 years old	8	7.5%
	From 4 to 10 years old	29	27.1%
	Up to 3 years	33	30.8%
	Amambai	2	1.9%
	Aquidauana	6	5.6%
	Campo Grande	30	28.0%
	Cassilândia	4	3.7%
	Coxim	1	0.9%
	Dourados (head office)	50	46.7%
University Campus	Glória de Dourados	1	0.9%
	Ivinhema	1	0.9%
	Jardim	1	0.9%
	Maracaju	2	1.9%
	Mundo Novo	3	2.8%
	Naviraí	1	0.9%
	Nova Andradina	1	0.9%
	Paranaíba	4	3.7%

Source: Field data (2024).

Observing Table 1, it is noted that the majority of respondents were women (63.6%). The age range of participants is concentrated between 41 to 50 years old, with over half of the participants holding a specialization (56.1%), and the majority of respondents are still in the early years of service at UEMS, with 57.9% having between 0 to 10 years of service in the institution.

Regarding the workplace, the University Unit with the highest participation was Dourados, accounting for 46.7%, followed by Campo Grande, with 28%. It is

understood that these responses correspond to the profile of the University, since Dourados, being the headquarters of UEMS, encompasses the highest number of administrative staff. Metric data with mean and standard deviation are presented in Table 2.

Table 2: Metric Data of Participants

Category	Mean	Standard Deviation
Age (in years)	40.92	12.16
Service time	10.49	7.43
Number of employees working at UEMS (per University Campus)	7.64	9.25

Source: Field data (2024).

The categories related to age and years of service indicate a concentration in the age range between 41 and 50 years with an average of 10 years of service. The standard deviation presented reflects variation in the number of employees from each University Unit, years of service, and age.

Regarding the performance of factors concerning the axis of Innovation Culture, the applied instrument allowed for the assessment of the administrative staff's perceptions at the University regarding the factors involving Innovation Culture. Table 3 depicts the measures of central tendency for each factor.

Table 3: Trend measures for Innovation Culture Factors.

Measurements	Factors					Innovation Culture
	IS	IC	EC	RI	IC	
Average	2.90	2.88	2.87	3.03	2.66	2.85
Median	3	3	3	3	3	3
Standard deviation	0.88	0.89	0.88	0.87	0.89	0.89

Source: Field data collection (2024). Legend: IC = Innovation Strategies - Content of Culture; IS = Innovation Strategies - Internal Communication System; IC = Conditions of the internal organizational context; EC = Relationship with the external context; RI = Results - perception of innovation effectiveness.

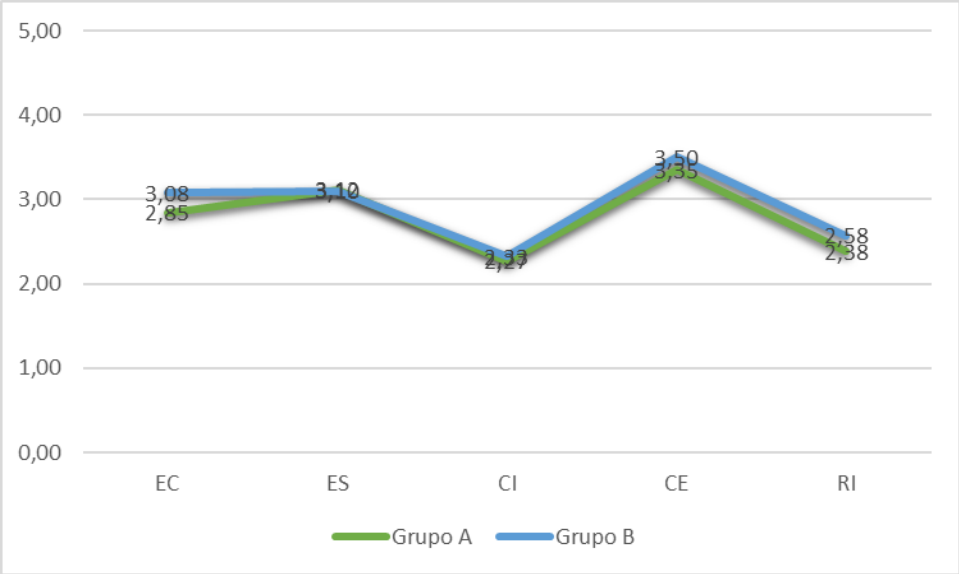
According to the sentences identified in each factor, the participants' perception of the variables was calculated. The average indicator of Innovation Culture was identified as 2.85, with a mean standard deviation of 0.89, indicating that there was not a significant variation in the responses found.

The factor related to Relationship with the external context (EC) was the only one that reached the highest average with 3.03, although it only slightly differed from Results - perception of innovation effectiveness (RI) with 2.66, indicating lower perception.



The scale applied measures the degree of perception of the factor from 1 to 5, with 1 being "Strongly Disagree" and 5 being "Strongly Agree". By segregating respondents from the Strategic level (Group A) - Advisory, Directorates, Management, and Vice-Rectories - from other sectors (Group B), respondents from the Tactical and/or Operational level - Protocol, Library, Course Coordinators, Secretaries, and other sectors, the variation in averages was found as presented in Graph 1.

Graph 1. Averages of Innovation Culture Factors by groups A and B

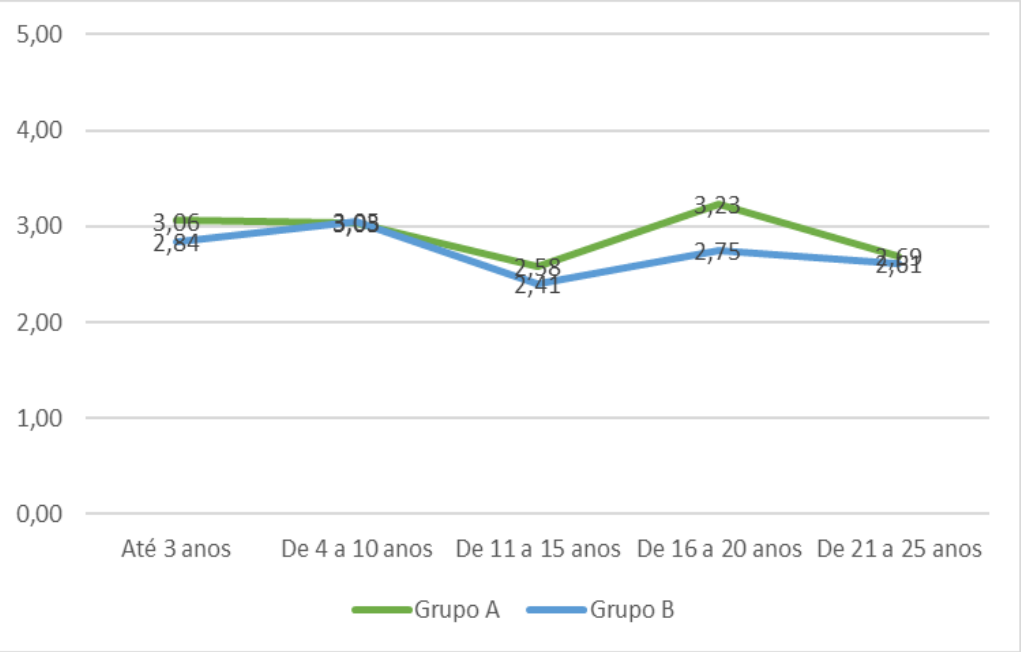


Source: Field data (2024).

It is possible to identify that the perception of the two groups occurs similarly. This corroborates the idea that organizational culture involves the organization as a whole, as a multidimensional context is built, transcending hierarchical levels (DOBNI, 2008; DIONÍSIO, 2019). However, it cannot be ignored that in the factors IC, EC, and RI, Group A presented an opinion with a lower average than Group B - Content of Culture (2.85 x 3.08), External Context (3.35 x 3.50), and Innovation Effectiveness (2.38 x 2.58), respectively. This difference, although small, may express a significant distinction. It is inferred that intermediate leadership, represented by Group A, faces difficulties in promoting/recognizing the items addressed about Innovation Culture, whether due to lack of training, insecurity, or resistance from the group itself (CREWS et al., 2022).

The perception of the factors according to the length of service in the organization was also verified, as shown in Graph 2.

Graph 2 - Average of Innovation Culture Factors according to time of exercise



Source: Field data (2024).

It is observed that employees in strategic positions (Group A), when compared to employees in Group B with similar length of service, more readily perceive the presence of pro-innovation elements. The segment of employees who have been with the institution for between 16 and 20 years is the most observant of innovations throughout UEMS's existence. In contrast, employees with 11 to 15 years of tenure at the institution have more difficulty noticing the presence of this cultural aspect. Given that the institution reached its 30th anniversary in 2023, it can be concluded that between 2003 and 2007, there were more innovation-focused initiatives, and the group working between 16 and 20 years witnessed something that the group working between 11 and 15 years did not experience. It is also evident that the university's recent actions have reinstated innovative stimuli.

In Table 4, the performance of each item in its respective factor can be observed.

Table 4. Averages of the items covered in the Innovation Culture Factors

Fatores	Indicador	Média
Innovation strategies - Culture content	IC4	3,02
	IC1	3,08
	IC5	3,03
	IC2	2,57



Innovation Strategies - Internal Communication System	IC3	2,80
	IS2-1	3,09
	IS1	2,93
	IS3-1	2,58
	IS2-2	2,75
	IS3-2	2,71
	IS4-1	3,26
	IS4-2	2,87
Conditions of the internal context of the organization	IC1	3,07
	IC2	2,32
	IC3	2,51
	IC5	2,68
	IC6	2,94
	IC8	2,67
	IC9	2,66
	IC11	2,94
Relationship with the external context	EC3	2,92
	EC1	2,74
Results - perception of the effectiveness of innovations	RI3-2	2,51
	RI3-3	2,76
	RI2	2,65
	RI3-1	2,83
	RI1	2,55

Source: Field data (2024).

In the following subsections, we will address each factor specifically.

4.1 CULTURE CONTENT

In the first factor, Innovation Strategies - Content of Culture (IC), points such as artifacts, structure, sustainability, individual behavior, and creativity were addressed. Overall, this factor obtained an average above the overall average (2.90), but it was not the most prominent. The items scoring slightly above 3 were IC1, IC4, and IC5, indicating that the organization regularly values learning and experimentation of new ideas, appreciates employees who offer new solutions to problems, and those who creatively tackle challenges.

On the other hand, it was noted that sentence IC2, which refers to the structure - apparatus, tools, software, and/or other innovative structures - of the University, obtained the lowest score (2.57) in this segment. Sentence IC3, regarding sustainability, was the second lowest, with an average score of 2.80. These indicators

below the perception of 3 reflect existing weaknesses, such as the recognition of the lack of more advanced systems for decision-making and actions corresponding to sustainability practices, which could ensure a competitive advantage, as discussed by Vendler and Maçaneiro (2021).

4.2 INTERNAL COMMUNICATION SYSTEM

Exploring the second factor, Innovation Strategies - Internal Communication System (IS), seven statements were investigated, and it was noted that the highest averages were IS4-1 and IS2-1, in that order. IS4-1 showed that the sharing of ideas, information, and experiences is mostly discussed with people from the same department. However, Bruno-Faria and Fonseca (2015) state that innovation flourishes more when employees from different groups exchange information due to the diversity context formed, meaning that discussions of incremental innovations across departments would yield more significant results. It was also noted that the University, in the general context, is an organization that tolerates errors regarding innovative practices.

Regarding the other items, it was observed that they did not reach an average score of 3, therefore falling under "Strongly Disagree" and "Disagree" when questioned about IS1, IS2-2, IS3-1, IS3-2, and IS4-2. The IS3-1 item had the lowest average of 2.57, which addressed the institutional system enabling people to communicate about innovations. This observation, according to Gimenez and Veiga (2020), compromises a well-established communication foundation capable of guiding and disseminating organizational functioning, as well as myths, taboos, norms, and beliefs.

4.3 INTERNAL ORGANIZATIONAL CONTEXT CONDITIONS

Based on the sentences analyzed in the third factor, Internal Organizational Context Conditions (IC), there was a good perception of the collaboration item (IC1), indicating that the organization recognizes the importance of innovation aligned with its projects and initiatives. IC6 and IC11 address leadership issues. Although they presented an average below 3, within this factor they obtained the second highest average (2.94). This suggests that, since the average is below regular, attention is needed because Yeshua-Katz and Efrat-Treister (2020); Dionísio (2019); Cavalcante



and Cunha (2014) assert that leaders develop relationships with their collaborators capable of stimulating work improvement and professionalization through creativity and innovation. With an average of 2.53, IC12 complements the low perception of measurement in the evaluation of functional performance when the employee suggests procedural or incremental innovations for the improvement of the institution, indicating that there is no monitoring by the competent authority.

Another aspect reported by the third factor was item IC2, which had the worst performance (2.32). It is understood that there is low perception regarding the records and consultations about the innovations made by the administrative body. Thus, it is concluded that the lack of such records leads to decisions being made based on pre-existing preferences, which result in decision-making processes with low rationality. This process, with a lack of monitoring, resembles the garbage can model of public policy decision-making developed by Cohen, March, and Olsen (1972), which among its drawbacks generates non-sequential solutions.

4.4 RELATIONSHIP WITH THE EXTERNAL CONTEXT

Regarding the fourth factor, Relationship with the External Context (EC), items EC3 and EC1 were analyzed. The average of 2.92 expresses the perception of item EC3 - that people have space to give feedback on how they were served, and 2.74 for item EC1, that employees are encouraged to innovate based on societal demands. It is noted that the established feedback channels and the responses that the University promotes in response to society have been discreetly recognized by the administrative body. The relevance of these traits, according to Lima et al (2023), establishes the "accountability" regarding performance and results, which in itself promotes transparency, legitimacy in actions, and reflects the level of governance and management maturity, and is expressed as relevant. Item EC2 had a high perception among collaborators, with an average value of 3.45. It is worth highlighting that the Institution's efforts towards expanding boundaries and cultural exchange have increasingly gained prominence.

4.5 PERCEPTION OF INNOVATION EFFECTIVENESS



The items related to the fifth factor, Results - perception of innovation effectiveness (RI), achieved an average score of 2.66. The highest-scoring item was RI3-1 (2.83), followed by RI3-3 with 2.76. Both items addressed reward and recognition mechanisms. It can be inferred that the administrative staff perceives recognition and reward mechanisms through participation in projects developed by the University and the visibility of their reach in social media and news outlets.

However, when these participations in extension activities are compared to innovations carried out within the workplace context (item RI1), there is a 0.11 decrease in the perception of employee recognition. In other words, the encouragement received through awards or bonuses for innovations within the administrative context is lower. This result aligns with the performance identified in the factor Internal Organizational Context Conditions (IC), the second-lowest average in the Innovation Culture indicator, after RI, confirming the weak perception of innovations within the employees' work environment.

Item RI2, which addresses the possibility of expressing contradictory ideas, scored 2.65, indicating a below-average perception regarding the openness to contradict already proposed ideas. This difficulty in identifying a safe space to convey contradictory ideas compromises an organizational climate that promotes creative performance, and subsequently, the improvement of the administrative machine (MUTONYI et al., 2020).

In summary, it is observed that innovation factors are present at UEMS, with no factor presenting a low average score of 1 - Totally Disagree. Positive recognition is due for items directly related to the external environment, as the average for the factor Relationship with the External Context was the highest (3.03) when compared to other factors. Additionally, it is acknowledged that the administrative staff understands that the University tolerates errors in innovative practices (IS2-1), values learning and experimenting with new ideas (EC1), and recognizes the importance of innovation aligned with its projects and initiatives (IC1). It should be noted that these items did not reach the highest point on the scale, indicating room for improvement.

Another noteworthy result highlights areas for improvement to strengthen the Innovation Culture within the organization. The lowest-scoring item was related to a system for recording and consulting innovations made by employees, and the second-lowest scoring item addressed conflicts and competitions being treated as

opportunities contributing to innovation. Therefore, interventions in conflicts still appear fragile, as they do not generate opportunities for change from these situations.

5 CONCLUSIONS

The present study aimed to analyze the level of innovation culture at the State University of Mato Grosso do Sul from the perspective of administrative staff. Although the debate on organizational culture and innovation is a complex topic involving intangible aspects that encompass the employees' understanding and their experience of how they comprehend the institution's guidelines, it was possible to collect the perception of the administrative body through items presented in the literature. The quantitative approach methodology used allowed for the construction of a diagnostic instrument for the level of innovation culture, which was validated based on elements found at the public state university in question.

According to the literature review, there are few studies that focus on innovation culture primarily from the perspective of administrative staff. The constructs were identified by five factors: Innovation Strategies regarding Cultural Content, Innovation Strategies regarding the Communication System, Internal Context Conditions, Relationship with the External Context, and Results, through the perception of the effectiveness of innovations. These factors initially broke down into 32 sentences, and after validation of the instrument, 29 sentences subsidized the analysis.

The survey was conducted via a Google Forms link sent to institutional emails in mid-December 2023 and January 2024. Through the survey technique, the majority of respondents interested/available to participate were women with up to 10 years of experience at the institution.

In general, identifying the Innovation Culture in administrative processes was found to be challenging, as no factor stood out with an average score approaching 4 - "Agree" or 5 - "Strongly Agree." Both in the perception of employees in more strategic roles and those in more operational functions, the average factor scores were close to "Regular."

However, when analyzing the level of Innovation Culture by the length of service within the institution, employees in strategic sectors (pro-rectories, managements, advisories, and directorates) identified innovation actions more visibly, peaking



between 2003 and 2007 - a period that saw the institutionalization of Zipmail and the implementation of other systems. After 2007, there was a noted decline in the administrative staff's perception, with those with 11 to 15 years of service reflecting greater difficulty in identifying these Culture factors. It is known that in mid-2008, the University lost its financial autonomy, suggesting that this drop in the graph may be a consequence of that event.

Further results indicated that regarding the Internal Context, in terms of apparatus, tools, software, and other innovative structures, as well as the Communication System, these remain weaknesses within the institution. The deficiency of non-integrated systems slows down internal procedures, such as the completion and adjustment of enrollments, or personnel management control, where managers seek information for more accurate decision-making, such as authorizing vacations while ensuring essential activities remain staffed.

When drawing a parallel with the proposed Governance and Management Model, which encompasses criteria highlighted by Contemporary Management, the maturity of governance relates to Innovation Culture to promote an environment that encourages creativity and spontaneity among employees to optimize the public machine. However, mapping sector activities to avoid rework and tracking academic requests processed in systems to ensure transparency and better control of start and end dates, reducing paperwork, among other technical productions, are very specific actions within the university. When these occur, they often go unrecorded, making it impossible to benefit from any reward mechanism.

Given this, it can be pointed out that this study contributes theoretically through a literature review in the Scopus and Web of Science databases from 2018 to 2023, seeking to delve deeper into the Innovation Culture applied in public institutions. In managerial terms, the development of an instrument to assess Innovation Culture in public bodies is noteworthy, as the contribution of Bruno-Faria and Fonseca (2015) was geared towards the private sector, and the developed instrument can potentially be replicated in other institutions with similar interests. Empirically, the questionnaire application allowed for the investigation of something that had not been previously explored in the state public higher education institution under analysis. This enables management to use the delivered diagnosis as a tool for preparing an action plan, addressing areas needing attention and further strengthening its strong points.



One observed limitation is that, as the research was restricted to closed questions, no success cases or improvement processes experienced by employees were collected. Additionally, there was difficulty in finding records of administrative innovations for analysis that would allow a comparison with the employees' tenure at the institution, which are more oriented towards incremental innovations and daily process optimizations, stored in the employees' memories. Another limitation is that, due to the sampling method used, generalizations cannot be made to other public higher education institutions.

Future studies should collect statements from employees using a qualitative-quantitative approach and apply the innovation culture assessment instrument in other public institutions to verify its semantic and statistical validity. It is also deemed necessary to monitor the encouragement of Innovation Culture not only at present but also to investigate its development and sustainability in the long term. Moreover, it would be relevant to examine the efficiency of innovation programs, measuring the impact of these reward mechanisms within the administrative domain of the university, focusing on promoting a more integrated culture beyond the contexts of research, teaching, and extension, but as a practice in daily procedural activities within the institution.

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