Carlos Rivera Gómez [1]
Universidad Nacional Politécnica
https://orcid.org/0009-0003-6017-8900
crivera@unp.edu.ni
Nicaragua

Rosa Cortez Otero [3]
Universidad Nacional Politécnica
https://orcid.org/0009-0006-1718-8953
rcortez@unp.edu.ni
Nicaragua

The organizational climate related to quality management at the National Polytechnic University

El clima organizacional relacionado a la gestión de la calidad en la Universidad Nacional Politécnica

O clima organizacional relacionado à gestão da qualidade na Universidade Politécnica Nacional

Abstract

Introduction: a satisfactory work environment fosters employee well-being and performance, which is crucial for the National Polytechnic University in fulfilling its mission. **Objective:** to analyze the current organizational climate of the University from the perspective of administrative and academic staff in relation to achieving institutional objectives. **Method:** the study employed a quantitative, non-experimental, cross-sectional exploratory approach. Data was obtained from a sample of 326 individuals, selected through simple random sampling, with a confidence level of 97%, a margin of error of 3%, and a Cronbach's Alpha coefficient of 0.931. **Results:** regarding organizational climate factors, the staff is observed to be satisfied in their positions, possessing the necessary knowledge for their development, with clear responsibilities for their functions, which contributes to communicating precise and adequate information to users. **Conclusion:** respondents consider the organizational climate to be positive across all campuses and express their commitment to institutional objectives in a work environment of respect and collaboration. Regarding strategies for continuous improvement, workers propose actions related to remuneration, training, and recognition.

Keywords: perception, organizational climate, improvement, satisfaction, quality

Resumen

Introducción: un clima laboral satisfactorio permite bienestar y rendimiento del personal, lo que es relevante para la Universidad Nacional Politécnica en el cumplimiento de su misión. **Objetivo:** analizar el clima organizacional actual de la Universidad desde la perspectiva de los trabajadores administrativos y académicos con relación al logro de los objetivos institucionales.

Método: tuvo un enfoque cuantitativo, de tipo no experimental y corte transversal exploratorio. Se obtuvo la información a partir de una muestra de 326, los cuales fueron seleccionados de forma aleatoria simple, con un nivel de confianza del 97%, un margen de error del 3%, y un coeficiente de Alfa de Cronbach 0.931. **Resultados:** relacionado con los factores del clima organizacional, se observa al personal satisfecho en su puesto de trabajo, al poseer los conocimientos necesarios para desarrollarse, con claras responsabilidades de sus funciones, lo que contribuye a comunicar información precisa y adecuada a los usuarios. **Conclusión:** los encuestados consideran el clima organizacional como positivo en todos los recintos, y expresan su compromiso con los objetivos institucionales en un ambiente de trabajo, respeto y colaboración. En cuanto a las estrategias para la mejora continua, los trabajadores proponen acciones relacionadas con remuneración, capacitación y reconocimiento.

Palabras clave: percepción, clima organizacional, mejora, satisfacción, calidad

Resumo

Introdução: um ambiente de trabalho satisfatório promove o bem-estar e o desempenho dos funcionários, o que é crucial para a Universidade Nacional Politécnica no cumprimento de sua missão. **Objetivo:** analisar o clima organizacional atual da Universidade a partir da perspectiva dos funcionários administrativos e acadêmicos em relação ao alcance dos objetivos institucionais. **Método:** o estudo utilizou uma abordagem quantitativa, não experimental e exploratória transversal. Os dados foram obtidos de uma amostra de 326 indivíduos, selecionados por amostragem aleatória simples, com um nível de confiança de 97%, uma margem de erro de 3% e um coeficiente Alfa de Cronbach de 0.931. **Resultados:** em relação aos fatores do clima organizacional, observa-se que os funcionários estão satisfeitos em suas posições, possuindo os conhecimentos necessários para seu desenvolvimento, com responsabilidades claras de suas funções, o que contribui para comunicar informações precisas e adequadas aos usuários. **Conclusão:** os respondentes consideram o clima organizacional positivo em todos os campi e expressam seu compromisso com os objetivos institucionais em um ambiente de trabalho de respeito e colaboração. Em relação às estratégias para a melhoria contínua, os trabalhadores propõem ações relacionadas à remuneração, capacitação e reconhecimento.

Palavras-chave: percepção, clima organizacional, melhoria, satisfação, qualidade

| Carlos Rivera Gómez | Rosa Cortez Otero |
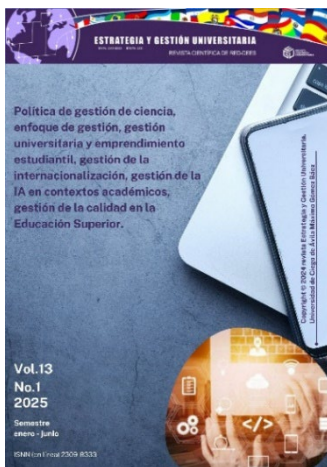
Introduction

The National Polytechnic University (UNP) of Nicaragua was established by Decree Law No. 1109, published in the Official Gazette on February 8, 2022, as the legal successor without interruption of the now-defunct "Polytechnic University of Nicaragua" (UPOLI), possessing legal personality and functional autonomy. Currently, the University has an organizational structure distributed across four levels: University Council, Rectory, Support Level, Substantive Level, and three Regional University Campuses (Boaco, Estelí, and Rivas), whose operations are regulated by institutional norms aligned with the national regulatory framework of the higher education system.

Due to its recent establishment, there is significant interest in understanding the current state of the organizational climate, identifying how it affects employee performance, with the aim of managing quality in all processes so that the continuous improvement model encompasses all actions of the institution. Analyzing the organizational climate (OC) is relevant for higher education institutions, as it reflects employees' perceptions of the work environment.

According to Chiavenato (2011) and Gómez Miranda (2023), the organizational climate is directly related to the motivation of the personnel within the institution. Therefore, an appropriate work climate not only attracts but also continuously motivates human talent, thereby ensuring that the results and positioning of the entity are more robust, effective, and sustainable over time.

In the organizational world, change is a constant necessity that must ensure the quality of the services provided or produced. Nowadays, discussing quality implies being in line with the highest standards of productivity, resource utilization, and management, particularly focusing on the user within the organization, as noted by Luna (2018), Jiménez-Pitre et al. (2023) when indicating that humanity has observed the nuances of its services since its inception and manages their improvement with the aim of continuously exceeding expectations, achieving superior quality in both the service and its processes.

Among the concepts of quality, one can refer to the definition provided by ISO 9000:2005, which defines quality as the degree to which a set of inherent characteristics of a good or service meets requirements. This definition is expanded upon by Luna González (2018), who describes quality as the "fulfillment of customer requirements, whether internal or external," wherein customer, adapted to the educational context, will refer to internal and external users. According to both definitions, quality encompasses characteristics defined by the subject "customer or user" in organizations, which it must satisfy.

Similarly, the concept of quality management is defined by the National Assessment and Accreditation Council (CNEA, 2019) as:

> A set of interrelated activities aimed at the continuous improvement of the substantive functions of the institution, program, or degree, through the processes of planning, execution, verification, and improvement, utilizing available resources optimally to meet the priorities of its mission and identity, as well as to contribute to the

| Carlos Rivera Gómez | Rosa Cortez Otero |

satisfaction of the needs and expectations of society (p. 40).

Building on these definitions of quality and its management, it is proposed that the institution must respond to both internal users (institution personnel) and external users (students, suppliers, and other stakeholders), meeting and exceeding their expectations not only in delivering the final service but also in their experience during the provision of that service. This means considering the processes involved in delivering the service required by the user. This aligns with the ISO 9001:2015 approach, which promotes the adoption of process management to coordinate the quality management system, as well as the principle of participation of individuals across the institution. A well-cohesive, involved, and committed staff, with clear objectives in developing their functions and processes, will contribute to achieving better results in delivering the final service to the external user, positively referencing the university. In this regard, Gonzales et al. (2018) and Cardeño Portela et al. (2023) emphasized the importance of implementing integration actions that promote the participation of workers and authorities in decision-making processes that benefit the institution and enhance the motivation and self-esteem of both management and employees, fostering a development free from doubt and distrust.

The management of cultural change and transformation to achieve improvements in performance and benefits for key stakeholder groups will lead to the necessary competitiveness in the changing and aggressive environment of global reality. The lack of implementation of quality management systems would jeopardize the continuity and existence of the university. In this sense, it is highly intertwined that institutional results are linked to user satisfaction, both internal and external; the satisfaction of internal users will largely condition that of external users. An institution will have more competitive advantages to the extent that the commitment and motivation of its collaborators contribute to continuous improvement. Therefore, this research aims to analyze the current organizational climate of the National Polytechnic University from the perspective of the administrative and academic staff concerning the achievement of institutional objectives.

Materials and methods

This research was conducted using a quantitative approach that is non-experimental and cross-sectional exploratory, as it allows for measuring the perceptions of respondents in a single data collection period limited to the year 2023. It is specified that the study encompasses all four campuses of the UNP: Managua Central Campus and the Regional University Campuses of Boaco, Estelí, and Rivas.

Information was collected using a survey technique, with the instrument consisting of three sections: the first section included demographic data categorizing the respondents; the second section comprised 30 statements related to organizational climate factors, including Collaboration, Communication, Conflict Management, Working Conditions, Professional Development, Training, Leadership of Immediate Supervisors, User Orientation, Job Satisfaction, and General Aspects. These statements were evaluated using a Likert scale ranging from 5 to 1 point,

| Carlos Rivera Gómez | Rosa Cortez Otero |

where: 5 (Always), 4 (Almost Always), 3 (Sometimes), 2 (Almost Never), and 1 (Never). The third section incorporated an open-ended question related to strategies for improving the work climate. This survey allowed for the collection of primary information from the respondents, while secondary information was obtained through a document analysis of various studies and theoretical references.

The validation of the instrument was conducted by consulting five experts, including three specialists in Human Talent Management and two specialists in Evaluation and Quality. The Cronbach's Alpha was applied to assess the reliability of the instrument, achieving a value of 0.931, indicating high consistency. For the application of the instrument, official data from the Human Talent Division as of September 2023 were considered, which indicated the existence of 434 employees. A sample of 326 employees was determined, calculated with a confidence level of 97% and a margin of error of 3%, according to the following formula:

$$n = \frac{Z^2 pqN}{e^2(N-1) + Z^2 pq}$$

Where N: Population, Z: Confidence Level, e: Margin of Error, p: Proportion of individuals in the population with the required characteristics for the study, and q: Proportion of individuals without these characteristics, i.e.,1-p.

The application of the formula yielded the following results:

Table 1

Sample calculation

| N.C	PROB.	Z	p	q	Error(e)	N	Numerator	Denominator	n
97	0.985	2.17	0.5	0.5	0.03	434	510.958	1.56702306	326

Source: Author's own elaboration.

As a method for data collection, Google Forms was utilized to administer the instrument, and data analysis was processed in SPSS version 2018 and Excel to assess the perceptions of workers regarding the organizational climate of the National Polytechnic University.

Results and discussion

According to the processing of the data collected through the survey, the Central Campus (Managua) accounted for 89% of the respondents, while the Regional University Campuses (Boaco, Rivas, and Estelí) accounted for 3%, 5%, and 3%, respectively, corresponding to the total number of workers at each campus (see Figure 1). This level of participation aligns with the total universe of 434 workers, which breaks down to 385 (89%) from the Central Campus, 14 (3%) from Boaco, 14 (3%) from Estelí, and 21 (5%) from Rivas.

Figure 1

Campus Affiliation
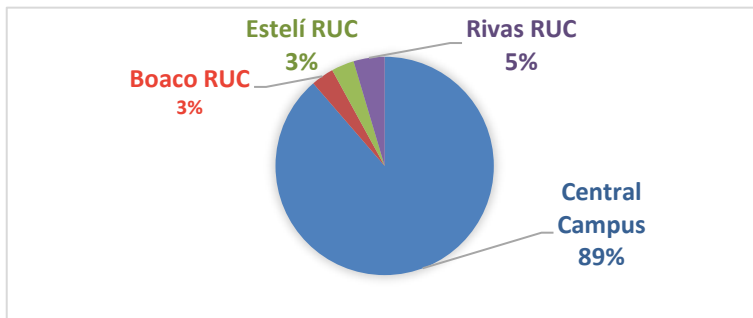
Source: Author's own elaboration.

Regarding the categories of the respondents, 77% were administrative staff and 23% were teaching staff, directly related to the type of contracts prevailing in the institution. Additionally, the age range of most respondents was between 41 and 50 years (37%), followed by those aged 51 and older (27%).

Collaboration

According to Pilligua and Arteaga (2019), collaboration is a factor that allows for the evaluation of the degree of maturity, respect, and camaraderie among staff, which directly affects the quality of human relationships within the entity. Additionally, González and Manzanares (2020) note that the collaboration of members, heads, and responsible parties in departments and instances contributes to the proper development of functions and institutional activities. Likewise, Lucas and Ureta (2019) assert that institutions should focus on creating appropriate work environments for employees to enhance their productivity levels.

In this sense, the results for this factor are favorable for the development of interpersonal relationships, positively impacting staff performance and directly contributing to the achievement of the University's objectives. Despite these overall results, it is observed that in the Estelí RUC, there is a need to implement actions that strengthen collaboration among staff and promote a harmonious, kind, and respectful work environment.

Regarding this factor, it was observed that the majority of respondents (90%) reported having the collaboration of their colleagues in the execution of tasks specific to their positions. Specifically, it was noted that in the Estelí RUC, unlike the others, there were lower results for the collaboration factor in the "Always" and "Almost Always" categories (64%).

With respect to collaboration with individuals from other areas, the majority of respondents (77%) indicated that they "Always" or "Almost Always" receive collaboration, which is positive for the institution; however, the evaluation from Estelí RUC indicated a lower proportion of collaboration among areas (55%).

| Carlos Rivera Gómez | Rosa Cortez Otero |

For this same factor, the majority of respondents (84%) stated that there is "Always" or "Almost Always" a cordial and respectful work environment; notably, Boaco RUC reported 100% in this regard. In contrast, Estelí RUC presented negative results in the "Sometimes," "Almost Never," and "Never" categories (64%).

Communication

Communication is an essential element in organizations and daily life; it is considered a critical management skill (Bozas Gomez et al., 2021, p. 189). Therefore, it is vital for coordinating the strategic processes of the institution, integrating various elements to achieve the efficiency and effectiveness of the university in reaching its objectives. According to Laines et al. (2021), 85% of a person's success depends on nine skills and abilities, such as communication, teamwork, and critical or analytical thinking, while only 15% of this success is attributed to knowledge and experience. Communicative skills allow individuals to send and receive ideas, opinions, or even emotional states in an assertive and respectful manner.

In reference to the communication factor, the vast majority of respondents (90%) indicated that internal communications "Always" or "Almost Always" provide useful information. This is viewed as a strategy that keeps employees informed about institutional management; similarly, 86% considered it a permanent activity. This pattern holds true for the Regional University Campuses as well. Villacorta-Méndez et al. (2023) acknowledge the importance of this practice when noting the effectiveness of transmitting ideas assertively, aiming to achieve synergy among collaborators to facilitate team discussions and the proper transmission of work plans.

Maintaining constant communication at all levels, among management, faculty, and administrative staff, establishes relationships and unifies criteria that benefit the institution in achieving its objectives. In this regard, based on staff perception, institutional communication is positive, as the information provided is useful and relevant; it is also considered a permanent activity. Therefore, this element would positively impact the achievement of the institutional mission and vision.

According to Díaz-Muñoz & Vásquez Pérez (2022), institutions that do not coordinate effective internal organizational communication struggle to achieve their objectives and are described as inert, lacking interaction and effective coordination (p. 30). Ensuring the flow of information contributes to the synchronized functioning of institutional systems, providing stability and balance through feedback. Communication holds strategic value, as it promotes efficient institutional management, fosters a culture of identity and loyalty, and contributes to improving the organizational climate.

According to ISO 21001:2018, one of the purposes of internal and external communication is to convey relevant, accurate, and timely information to stakeholders, consistent with the organization's mission, vision, strategy, and policies.

Conflict Management

| Carlos Rivera Gómez | Rosa Cortez Otero |

Institutions often face difficulties in adapting to alterations in their environments due to economic, political, and cultural changes. Rapid and unexpected changes frequently lead to resistance and potentially generate conflicts inherent to human nature and the professional environment itself. Mirabal (2021) infers that conflict among the personnel within organizations is an inevitable process, making it necessary to devise appropriate strategies to eliminate or manage these conflicts effectively. Such strategies can maintain the flow of processes, achieve optimal agreements within institutions, and contribute to strengthening relationships and fostering healthy coexistence, thereby creating a more positive work atmosphere. This approach can help transcend personal positions in favor of institutional interests.

According to ISO 10003:2018, conflict resolution aids in correction by facilitating, advising, or determining the elements that caused complaints, dissatisfaction, or deterioration in the code of conduct. It can also facilitate continuous improvement in the quality of processes and products based on feedback from users, complainants, and other stakeholders.

Moreover, Morán (2020) argues that work-related stress and mental and physical exhaustion contribute to the emergence of conflicts within an organization, adversely affecting work performance, damaging labor relations, and limiting the ability to achieve organizational goals.

The management of conflict can yield constructive or destructive results, depending on how the leader chooses to handle the situation. It is also important to establish harmonious working groups that engage in long-term interactions to achieve common objectives, allowing for defined, useful, and effective actions that consider everyone's efforts while avoiding individualism in the workplace. In this regard, the majority of respondents (89%) rated their ability to manage problems with coworkers as "Always" or "Almost always."

Based on the perceptions of the workers and the aforementioned authors, conflict management is handled appropriately within the institution, thereby generating a positive organizational climate that strengthens relationships and fosters a healthy environment for coexistence. Interaction within work teams is conducive to achieving optimal results that align with institutional strategies, while also facilitating continuous improvement in the quality of educational services.

Working Conditions

According to Macías and Vanga (2021), organizational climate is directly proportional to the conditions of the workplaces, as the comfort and ergonomic conditions under which activities are performed will determine their success. Additionally, it is of great importance for outcomes that workers have the necessary tools and supplies for the development of their work.

Furthermore, the ISO 45001:2018 standard states that workers are one of the main assets of an entity; therefore, ensuring both their safety and well-being will provide valuable benefits to the institution. Thus, the best possible working conditions and environment must be offered so that workers feel comfortable, as this will directly influence their happiness and indirectly result in numerous benefits

for the university, such as increased productivity, motivation, greater engagement in their roles, reduced stress and absenteeism, lower turnover, and improved workplace relationships, as they are in an environment that meets their comfort and ergonomic expectations.

Regarding labor obligations and conditions, Quezada Castro et al. (2021) indicate that a teacher must deliver a specific subject in a classroom and record the students' grades either physically or digitally. In contrast, the university's obligation is to provide the physical space and technological tools that enable the teacher to fulfill their duties within the university setting without neglecting the legal requirements for providing a pleasant, safe, and conducive teaching environment. As previously described, the optimal conditions provided in the institution's facilities favor the work climate, as comfort and convenience are factors that contribute to productivity.

Concerning working conditions, the Regional University Campuses (RUC) indicated that "Sometimes" (45%) they have the necessary materials and resources to perform their work, unlike the Central Campus, which rated this positively. In terms of conditions such as space, noise, temperature, and lighting, the results are divided among the campuses; two (Central Campus and Boaco RUC) considered that the environmental conditions "Always" or "Almost always" allow them to perform their work normally (71%), unlike the Estelí and Rivas campuses, which rated these conditions lower (54% and 53%, respectively).

Despite the positive perception of the Central Campus regarding the availability of necessary materials and resources for work, it is important for the institution to analyze the allocation of these resources to the RUCs given their low ratings. The lack of resources can impact the responses to the services required by students and diminish educational quality from the perspective of administrative and academic management. Similarly, it is recommended to review the working conditions to ensure normal job performance at the Estelí and Rivas RUCs, which slightly differ from the Central Campus and Boaco RUC, as this may negatively influence the organizational climate over time.

Career Development

Career development is one of the personal and professional objectives of employees within the institution, which simultaneously enriches the organization through increased productivity and knowledge development. The organizational climate will be strengthened to the extent that there are growth opportunities within the organization, and a generational succession plan based on acquired knowledge, experiences, and capabilities is established, as noted by Núñez et al. (2012), cited by Marecos et al. (2022).

According to ISO 21001:2018, knowledge must be updated to align with scientific and technological advancements, as well as the changes that arise within the entity. Therefore, academic and administrative staff should develop their careers within the institution, taking into account experience, training, and expertise to achieve competencies and growth in a changing environment.

Regarding career development, the majority (90%) of respondents considered that performance evaluation criteria are adequate. In relation to job

performance, 81% rated the opportunity for professional development at the university as "Always" or "Almost always." Additionally, 87% indicated that their supervisor clearly informs them about their job functions and responsibilities.

In conclusion, this factor is viewed very positively, as staff consider the performance evaluation criteria adequate and, based on the results, have high expectations for professional development at the university while being informed about their job functions and responsibilities. This outcome has a favorable impact on the organizational climate, as it suggests that employees are developing with clearly defined objectives that are aligned with institutional goals.

Training

Moreira (2016, cited by León et al., 2018) asserts that the training of human resources at the educational level allows for the identification of relational needs and the application of strategies to improve performance. According to ISO 27001:2022, professional development, educational continuity, or training is essential, as the benefits include new job opportunities, professional recognition, better income, and opportunities for advancement and growth, all of which contribute to organizational development.

In this regard, ISO 9001:2015 states that if the organization's management is willing to invest time and resources in employee training, employees will develop a stronger sense of identity with the organization, feel valued, enhance their skills, and maximize the institution's benefits, thereby driving it toward success.

Regarding the training factor, 58% of respondents indicated on the scale of "Always" and "Almost always" that the institution updates its knowledge. In relation to professional development plans, 65% reported that these are adequate to their needs, while specifically, Estelí RUC rated it as "Sometimes" at 55%, indicating a cause for concern in this area.

The updating of knowledge and its alignment with training needs is viewed positively; however, it is advisable to conduct an analysis at Estelí RUC, where doubts arise concerning the adequacy of the plans in relation to their training needs, encouraging development in line with performance evaluation results.

Immediate Supervisor Leadership

According to Rojas, Martínez No et al. (2020), leadership is essential for motivating employees to commit to achieving organizational objectives and contributes to the healthy development of an effective work climate that fosters harmony, positivity, and enthusiasm within the entity. In this regard, ISO 9001:2015 states that leaders within an organization must establish and maintain a work environment in which employees feel comfortable. Only then will they be motivated to achieve the proposed objectives. An organization is only as good as the vision and competence of its leadership.

The data obtained indicate positive results in the leadership factor, as the vast majority believe that immediate supervisors manage their staff positively, fostering an atmosphere of tolerance and respect that encourages goal achievement in a pleasant work environment.

| Carlos Rivera Gómez | Rosa Cortez Otero |

In the immediate supervisor leadership factor, it is identified that most respondents (71%) reported that their supervisor congratulates them when they perform well. Furthermore, 83% indicated that their immediate superior is concerned with maintaining a good team climate, which is supported by 80% who stated that their supervisor is receptive to suggestions for improving work processes. Given the importance of this element, it is noted that in the Estelí RUC, 18% of respondents expressed that there is a lack of active listening from their supervisor.

Regarding personal well-being, 82% expressed, on the scale of "Always" and "Almost always" that their supervisor cares about their personal well-being, and 81% reported that their immediate superior treats them fairly while avoiding favoritism. Concerning the development of their functions, 87% indicated that they feel empowered to take initiatives.

User Orientation

According to Espinoza Juarez (2022), there is a close link between organizational climate and user orientation, with the latter influenced by the quality and accessibility of services. By understanding and meeting user needs, the institution can achieve better performance in its outcomes. Effective user orientation is established through facilitating service delivery, addressing questions and user needs, and providing guarantees for the services offered, which will enhance user trust in the institution. This process is supported by personnel committed to the organization and managed within a positive work environment.

ISO 21001:2018 states that the focus on students and other beneficiaries involves satisfying user needs, including their expectations, as success is achieved when an institution attracts and retains the trust of these individuals and other stakeholders upon whom it depends. Each interaction with a user presents an opportunity to create more value for them. Understanding the current and future needs of students or other beneficiaries ensures the continuous success of the organization. Additionally, Prieto and Tarazona (2019) indicate that greater production and efforts should be centered on satisfying both external and internal users to achieve their loyalty; however, internal users are often overlooked. Consequently, when upper management fails to prioritize the improvement of internal processes, it negatively affects them, as internal users may not recognize that they are providing a service to their colleagues, which can impact work efficiency.

In this regard, 82% of respondents indicated, on a scale of "Always" and "Almost always," that the work processes and procedures at the university guide them in responding to both internal and external users. This aligns with the 95% who expressed that they provide adequate attention to those who consult them.

The results reflect good user service, indicating that there is a strong command of the processes developed at the university to guide students and other interested parties on the procedures to follow, thereby generating trust in the institution. Furthermore, the commitment of the staff to provide adequate attention to all users is evident.

Job Satisfaction

Job satisfaction, productivity, nonattendance, and employee turnover are integral components of organizational behavior. In this context, one of the quality pioneers, Juran (1990), asserts that employees at various levels of the organization speak a unique language, and when one is motivated, it can incentivize others. In this regard, the ISO 9001:2015 standard specifies that employees who receive training or education within their organization feel competent, productive, and consequently, more satisfied. Similarly, Vargas Vega et al. (2018) emphasize the importance of prioritizing job satisfaction to ensure that employees feel fulfilled, valued, and recognized for their contributions, as this represents a variable that directly impacts productivity.

To enhance job satisfaction, support was drawn from quality pioneers such as Deming, who advocates for the removal of barriers that prevent staff from feeling pride in their work, and Juran, who highlights the significance of recognizing outstanding teams. Crosby's approach encourages personnel to communicate obstacles they face in achieving their improvement goals to management.

Regarding their roles, 95% of respondents indicated, on a scale of "Always" and "Almost Always," that they are clear about their tasks and responsibilities. Additionally, 97% expressed that they possess the necessary knowledge to perform their functions, and 94% affirmed that their work presents challenges and opportunities for further improvement. A majority, 74%, reported that their work is recognized and valued. Furthermore, 71% noted effective stress management in their environment, which aligns with the 83% who indicated that they rarely experience anger, according to the scales of "Sometimes," "Almost Never," and "Never."

The results suggest that there is job satisfaction, as employees confirm they have the necessary knowledge to carry out assigned functions and that their efforts are recognized. This creates expectations that improved performance leads to greater economic, social, and psychological rewards.

General Aspects

98% of respondents stated that they are "Always" or "Almost always" oriented towards fulfilling the mission and achieving the institutional vision. 93% expressed satisfaction with their work at the university, and 97% indicated that they have the opportunity to do their best every day at work.

The previous results reflect a high level of commitment to the strategic management of the institution, as respondents possess the necessary knowledge to achieve institutional goals. In this regard, organizational climate and strategic management contribute to the institution's leadership and staff directing their efforts and knowledge towards developing the mission and achieving the institutional vision. Additionally, this allows the university to define its priorities and a set of parameters for nearly all relevant administrative decisions.

Strategic Actions

Regarding the variable of strategies to improve the organizational climate, it is observed that 25% of respondents suggested actions related to compensation,

which includes salary increases or adjustments, activation of economic benefits, and other monetary recognitions. 21% referred to staff training, followed by 14% who expressed the need for recognition and appreciation for their work, either verbally or in writing. 11% proposed actions related to improving communication, 7% suggested enhancing physical workspaces, and 5% indicated the need for recreational activities, among other suggestions.

Conclusions

During the period covered by the research, 83% of the employees at the National Polytechnic University perceived a positive organizational climate, both at the Central Campus and in the Regional University Campuses (RUC). This indicates that the strategic guidelines set by the administration are effective in managing the university's organizational climate, reflecting a high level of commitment and a good relationship between the university's leadership and its human resources.

Regarding strengths, it is evident that employees feel committed to the institutional objectives, contributing to the achievement of the mission and vision in a work environment characterized by respect and collaboration. It is important to highlight that knowledge of processes and procedures, as essential elements for user orientation, enhances their confidence in the institution, leading to better institutional projection. In terms of opportunities for improvement, resources should be allocated to strengthen the training factor in employees' areas of competence, in order to enhance their capabilities for institutional success. Additionally, there is a need to improve working conditions in the RUCs. Conversely, at the Estelí RUC, it is necessary to implement actions that strengthen collaboration among staff and improve working conditions.

With regard to strategies that contribute to improving the organizational climate at UNP, it is proposed to consider actions that address aspects related to compensation, such as implementing a salary scale, incentives, bonuses, or other economic benefits; training staff through a professional development plan; and recognizing and valuing the work performed by labor groups, either verbally or in writing. For example, selecting outstanding employees of the year based on performance evaluations, accompanied by respective diplomas or certificates, or other forms of recognition.

It is recommended to implement actions in the RUCs aimed at improving physical workspaces and providing strategies for the development of successful interpersonal communication. These could include cultural and recreational activities, as well as sports competitions involving all members of the institution, with the goal of fostering teamwork, solidarity, socialization, and a culture of peace.

References

Asamblea Nacional (2022). Ley No. 1109. *Ley Creadora de la Universidad Nacional Politécnica*. Managua, Nicaragua.

Bozas-Gómez, V., Sánchez Leyva, J. L., Domínguez Márquez, J. G., García, Z. Q., & Ugarte, J. V. (2021). Comunicación organizacional en las empresas del sur

de Veracruz en tiempos de COVID-19. *UVserva*, (12), 186-205. https://doi.org/10.25009/uvs.vi12.2801; https://uvserva.uv.mx/index.php/Uvserva/article/view/2801/4738

Cardeño Portela, N., Cardeño Portela, E. J., & Bonilla Blanchar, E. (2023). TIC y transformación académica en las universidades. *Región Científica*, 2(2), 202370. https://doi.org/10.58763/rc202370

Chiavenato, I. (2011). *Administración de Recursos Humanos, El Capital Humano de las Organizaciones*. Mc.Graw-Hill. http://bibliotecas.uasb.edu.bo:8080/handle/54000/1145

Consejo Nacional de Evaluación y Acreditación (2019). *Modelo de Calidad de la Educación Superior Nicaragüense*. Managua, Nicaragua. https://www.cnea.edu.ni/sites/default/files/202107/Modelo%20de%20Calidad%20CNEA%20VF%20Digital%20190521.pdf

Díaz Muñoz, R. E., & Vásquez Pérez, K. J. (2022). Comunicación organizacional interna y satisfacción laboral en la municipalidad provincial de Hualgayoc-Bambamarca. *Revista Compás Empresarial*, 13 (34), 28-41, https://revistas.univalle.edu/index.php/compas/article/view/223/283

Espinoza Vásquez, G., & Juárez-Gutierrez, R. E. (2022). El Clima organizacional y satisfacción del usuario al recibir atención en una municipalidad (The organizational climate and user satisfaction in a municipality). *GESTIONES*, 2(1), 1–11. https://gestiones.pe/index.php/revista/article/view/42

Gómez Miranda, O. M. (2023). Factores institucionales que impactan en la actividad emprendedora de los estudiantes universitarios. *Región Científica*, 2(1), 202327. https://doi.org/10.58763/rc202327

Gonzales Reyes, J., Paredes Núñez, M., Núñez López, R., Paredes Núñez, V., & Paredes Núñez, I. (2018). La influencia del liderazgo en el clima organizacional de las empresas. *Revista de Investigación*, 42 (95), 241-249. https://www.redalyc.org/journal/3761/376160247012/376160247012.pdf

González Gaya, C. & Manzanares Cañizares, C. (2020). *Sistemas de Gestión de la Calidad ISO 9001 Guía de aplicación*. Editorial UNED. http://legislacion.asamblea.gob.ni/normaweb.nsf/($All)/9E42701CA3C5260D062587E5006AFBEC?O

ISO 9001:2015, Sistemas de Gestión de la calidad – Requisitos.

ISO 10003:2018, Gestión de la Calidad- Satisfacción del cliente- Directrices para la resolución de conflictos de forma externa en la Organización.

ISO 21001:2018, Sistema de Gestión para Organizaciones educativas- Requisitos con orientación para su uso.

ISO 27001:2022, Formación de Sensibilización- Sistema de Gestión de la Seguridad de la Información.

ISO 45001: 2018, Sistema de Gestión de la Seguridad y Salud en el Trabajo.

Jiménez-Pitre, I., Molina-Bolívar, G., & Gámez Pitre, R. (2023). Visión sistémica del contexto educativo tecnológico en Latinoamérica. *Región Científica*, 2(1), 202358. https://doi.org/10.58763/rc202358

Juran, J. M. (1990). *Juran y el liderazgo para la calidad: manual para ejecutivos*. Ediciones Díaz de santos. https://acortar.link/VBxc9e

Laines Alamina, C. I., Hernández García, A. P., & Zamayoa Urbina, D. A. (2021). La importancia de las habilidades blandas en el Home office y su impacto en la productividad de una empresa. *VinculatÉgica*, 7(1), 929-944. http://eprints.uanl.mx/26208/1/37.pdf

León, L., Noriega, E., & Murillo, M. (2018). Impacto del clima organizacional sobre el rendimiento laboral del docente. *Fides et Ratio - Revista de Difusión cultural y científica de la Universidad La Salle en Bolivia*, 16(16), 15-32. http://www.scielo.org.bo/scielo.php?script=sci_arttext&pid=S2071-081X2018000200003&lng=es&tlng=es

Lucas, C. F. P., & Ureta, F. M. A. (2019). El clima laboral como factor clave en el rendimiento productivo de las empresas. estudio caso: Hardepex Cía. *Ltda. Cuadernos latinoamericanos de administración*, 15(28). https://www.redalyc.org/journal/4096/409659500007/409659500007.pdf

Luna González, A. C. (2018). *Proceso administrativo* (2da Edición). Grupo Editorial Patria. https://acortar.link/4XIAvO

Macías, E., & Vanga, M. (2021). Clima organizacional y motivación laboral como insumos para planes de mejora institucional. *Revista Venezolana de Gerencia*, 26 (94), 548-567. https://www.redalyc.org/journal/290/29069612005/html/

Marecos Duarte, M. A., & Fabián Medina, R. (2022). Clima laboral como factor clave en el rendimiento productivo de las instituciones públicas de Pilar. *Ciencia Latina Revista Científica Multidisciplinar*, 6(4) 3833-3855. https://doi.org/10.37811/cl_rcm.v6i4.2890

Mirabal Sarria, Y. (2021). Los conflictos empresariales y el clima organizacional: ¿Cómo tratarlos y evitarlos a futuro? *E-IDEA Journal of Business Sciences*, 3(11), 52-63. https://doi.org/10.53734/eidea.vol3.id92

Morán Jarquín, M. (2020). Estrés Laboral Como Generador De Conflictos Escolares en El Aula a Nivel Preescolar. *Revista Mexicana de Orientación Educativa*, 27–32, 2020. https://research.ebsco.com/c/lstvae/viewer/pdf/3mmj6e76zr?route=details

Pilligua, C. & Arteaga F. (2019). El clima laboral como factor clave en el rendimiento productivo de las empresas. Estudio Caso: Hardepex Cía Ltda. *Cuadernos Latinoamericanos de Administración*, XV(28). https://www.redalyc.org/journal/4096/409659500007/html/

Prieto, S. R. S., & Tarazona, M. T. P. (2019). Percepción de la calidad de servicio del usuario interno en una institución pública. *Industrial data*, 22(1), 95-103. https://www.redalyc.org/journal/816/81661270006/81661270006.pdf

Quezada Castro, M. D. P., Castro Arellano, M. D. P., Dios Castillo, C. A., & Quezada Castro, G. A. (2021). Condiciones laborales en la educación universitaria peruana: Virtualización ante la pandemia COVID-19. *Revista Venezolana De Gerencia*, 26(93), 110-123. https://doi.org/10.52080/rvg93.09

Rojas, C., Martínez, P., & Niebles, W. (2020). Factores del Clima Laboral predominantes en organizaciones de salud privada del municipio Montería. *Revista Espacios*, 41(32). https://es.revistaespacios.com/a20v41n32/a20v41n32p03.pdf

Vargas Vega, T. D. J., Vizzuett Balderas, V., Amador Montiel, E., Becerra Córdova, L. E., & Villegas González, E. (2018). La satisfacción laboral y su influencia en la productividad. Teuken Bidikay: *Revista Latinoamericana de Investigación en Organizaciones, Ambiente y Sociedad*, 9(13). https://eds.p.ebscohost.com/eds/detail/detail?vid=0&sid=0033fe6e-e717-4fc7-8fc8-e34b59902701%40redis&bdata=JkF1dGhUeXBlPWlwLHVybCZzYW5nPWVzJn

Villacorta-Méndez, Jessica Esther, Colina-Ysea, Félix José, Pantigoso-Leython, Nathalí, & Valverde-Alva, Weslyn Erasmo. (2023). Habilidades directivas y comunicación organizacional interna. *Revista Arbitrada Interdisciplinaria Koinonía*, 8(16), 32-54. https://doi.org/10.35381/r.k.v8i16.2516

About the main author

Carlos Rivera Gómez: graduated from the Master's Degree in Quality Assessment and Accreditation in Higher Education, from the National Polytechnic University; Graduate in Banking and Finance, from the Polytechnic University of Nicaragua – UPOLI, Postgraduate in Internal Control and Corporate Fraud (UPOLI).

Declaration of author responsibility

Carlos Rivera Gómez 1: Conceptualization, Data Curation, Formal Analysis, Research, Methodology, Resources, Software, Supervision, Validation/Verification, Visualization, Writing/original draft, and Writing, review and editing.

Rosa Cortez Otero 2: Research, Methodology, Software, Supervision, Validation/Verification, Writing/original draft and Writing, review and editing.