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Self-perception of Leadership Behaviors in a Military Higher Education Institution: A Study at the Armed Forces University-ESPE

Autopercepción de las Conductas de Liderazgo en una Institución de Educación Superior Militar: Un Estudio en la Universidad de las Fuerzas Armadas-ESPE

Autopercepção dos Comportamentos de Liderança em uma Instituição de Ensino Superior Militar: Um Estudo na Universidade das Forças Armadas-ESPE

Abstract

Introduction: leadership in military higher education institutions, such as the Armed Forces University (UFA-ESPE), plays a fundamental role in their academic management and organizational development. **Objective:** to analyze how the directors of UFA-ESPE perceive their leadership in the dimensions of tasks, relationships, and change, and its implications in a military educational environment. **Method:** a descriptive quantitative approach was employed with a sample of 70 directors. Data collection was carried out using the CONLID-A questionnaire, evaluating reliability with the Cronbach's Alpha coefficient. **Results:** the directors show a positive perception of their leadership, with relationship-oriented behaviors (mean of 4.33) standing out, followed by task-oriented (4.26) and change-oriented (4.20) behaviors, reflecting a balance between operational efficiency and the promotion of interpersonal relationships in the military environment. **Conclusion:** the findings suggest that the directors of UFA-ESPE perceive effective leadership in the three key dimensions. In the context of military educational institutions, these behaviors are essential to maintain cohesion and adapt to changes, highlighting the importance of training programs that promote comprehensive and balanced leadership.

Keywords: leadership behaviors, CONLID-A questionnaire, university managers, military educational context

Resumen

Introducción: el liderazgo en instituciones de educación superior militar, como la Universidad de las Fuerzas Armadas (UFA-ESPE), juega un papel fundamental en su gestión académica y desarrollo organizacional. **Objetivo:** analizar cómo los directivos de la UFA-ESPE perciben su liderazgo en las dimensiones de tareas, relaciones y cambio y sus implicaciones en un entorno educativo militar.

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Método: se empleó un enfoque cuantitativo descriptivo con 70 directivos como muestra. La recolección de datos se realizó mediante el cuestionario CONLID-A, evaluando la fiabilidad con el coeficiente Alfa de Cronbach. **Resultados:** los directivos muestran una percepción positiva de su liderazgo, destacándose las conductas orientadas a las relaciones (media de 4.33), seguidas por las orientadas a las tareas (4.26) y al cambio (4.20), lo que refleja un equilibrio entre la eficiencia operativa y el fomento de relaciones interpersonales en el entorno militar. **Conclusión:** los hallazgos sugieren que los directivos de la UFA-ESPE perciben un liderazgo efectivo en las tres dimensiones clave. En el contexto de instituciones educativas militares, estas conductas son esenciales para mantener la cohesión y adaptarse a los cambios, lo que resalta la importancia de programas de formación que promuevan un liderazgo integral y equilibrado.

Palabras clave: conductas de liderazgo, cuestionario CONLID-A, directivos universitarios, contexto educativo militar

Resumo

Introdução: a liderança em instituições de ensino superior militar, como a Universidade das Forças Armadas (UFA-ESPE), desempenha um papel fundamental na sua gestão acadêmica e desenvolvimento organizacional. **Objetivo:** analisar como os diretores da UFA-ESPE percebem sua liderança nas dimensões de tarefas, relacionamentos e mudanças, e suas implicações em um ambiente educacional militar. **Método:** foi empregada uma abordagem quantitativa descritiva com uma amostra de 70 diretores. A coleta de dados foi realizada por meio do questionário CONLID-A, avaliando a confiabilidade com o coeficiente Alfa de Cronbach. **Resultados:** os diretores mostram uma percepção positiva de sua liderança, destacando-se os comportamentos orientados para relacionamentos (média de 4,33), seguidos pelos orientados para tarefas (4,26) e para mudanças (4,20), refletindo um equilíbrio entre eficiência operacional e promoção de relacionamentos interpessoais no ambiente militar. **Conclusão:** Os achados sugerem que os diretores da UFA-ESPE percebem uma liderança eficaz nas três dimensões-chave. No contexto de instituições educacionais militares, esses comportamentos são essenciais para manter a coesão e se adaptar às mudanças, destacando a importância de programas de formação que promovam uma liderança abrangente e equilibrada.

Palavras-chave: comportamentos de liderança, questionário CONLID-A, gestores universitários, contexto educacional militar

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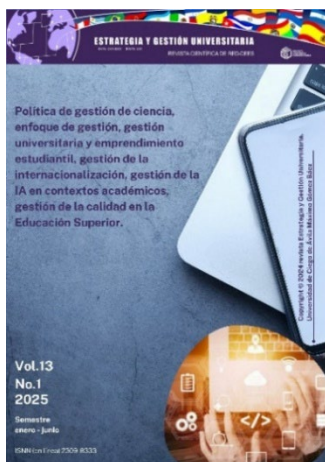
Introduction

Understanding leadership in military educational institutions, such as the Armed Forces University – ESPE (UFA-ESPE), formerly known as the Higher Polytechnic School of the Army (ESPE), is essential due to the unique interaction between academic and disciplinary demands. This article addresses the self-perception of leadership behaviors among the administrators of this institution, analyzing key dimensions such as task orientation, relationships, and change—dimensions that have been highlighted by previous research (Geraldo et al., 2020; Márquez & Chávez, 2021; Demircioglu & Chowdhury, 2021). The research is grounded in the use of the CONLID-A questionnaire, proposed by Castro et al. (2007), a validated instrument that allows for the analysis of how leaders perceive their behaviors in an environment characterized by its organizational duality.

In the current context, leadership is defined not only by the ability to manage tasks but also by the capacity to foster strong relationships and lead processes of change. Previous studies emphasize the relevance of leadership and its impact on the management of educational institutions (Lasso et al., 2019; Huerta & Muñoz, 2020; Rivera & Higuera, 2022; Moscoso & Calderón, 2023; Cardeño Portela et al., 2023; Calderón Arregui, 2023). However, in military educational environments, these dynamics acquire a particular dimension as they require balancing high-performance standards with team cohesion and motivation (Fournier, 2019; Gómez Miranda, 2023; Calderón Arregui & Sánchez, 2023; Jiménez-Pitre et al., 2023; Calderón Arregui et al., 2023; Leso et al., 2023; Assoratgoon & Kantabutra, 2023).

Leadership is a fundamental concept for understanding organizational dynamics and the development of educational institutions, especially in military contexts (Nader & Castro, 2009; García & Pastor, 2022; Pastor et al., 2021; Uhl-Bien, 2021; McCauley & Palus, 2021; Torres, 2022; Whyte et al., 2022; Chatterjee et al., 2023; Calderón Arregui et al., 2023; Ahmad et al., 2024). Leadership theory has evolved significantly over time, from models centered on individual traits to more comprehensive approaches that consider relationships, tasks, and organizational change processes (Hemphill & Coons, 1957; Stogdill et al., 1963). This theoretical evolution allows for examining the phenomenon of leadership as a complex process that combines technical, interpersonal, and strategic skills.

In the realm of military higher education, leadership acquires particular relevance due to the need to balance high levels of discipline with an academic environment that fosters innovation and critical thinking (Wagner et al., 2022; O'Connor & Kearney, 2023; Solano et al., 2024). According to Yukl (2002), leadership is defined as a process of social influence through which an individual guides and motivates a group toward the achievement of common goals. This theoretical framework serves as the basis for analyzing leadership behaviors in institutions like UFA-ESPE, where hierarchical structure and academic demands intertwine.

Leadership behaviors can be categorized into three main dimensions: task-oriented, relationship-oriented, and change-oriented (Yukl, 2002; Castro et al., 2007). First, task-oriented behaviors focus on the planning, organization, and supervision of activities to ensure the achievement of organizational objectives. These behaviors are essential in military contexts, where operational precision and effectiveness are priorities. Second, relationship-oriented behaviors aim to promote

communication, trust, and mutual support among team members. These skills are key to maintaining motivation and cohesion in environments where hierarchical structures prevail (Bass & Avolio, 1994). Finally, change-oriented behaviors reflect the leader's capacity to manage organizational transformations, anticipating challenges and fostering innovation.

In the context of UFA-ESPE, the self-perception of leadership styles takes on a critical dimension. The perception that leaders have of their own capabilities directly influences their ability to lead teams and promote significant changes (Geraldo et al., 2020). This study uses the CONLID-A questionnaire, developed by Castro et al. (2007), as a tool to evaluate leadership behaviors across the three mentioned dimensions. This instrument has been validated in educational and military contexts, demonstrating its reliability for measuring self-perception of leadership.

Moreover, the literature suggests that leadership in military educational institutions faces unique challenges (Srivastava et al., 2021; Polatcan, 2023; Anwar & Saraih, 2024), such as the need to manage change while upholding traditional values of discipline and hierarchy (Fournier, 2019). This underscores the importance of developing training programs that strengthen leadership competencies, integrating theoretical and practical approaches that enable leaders to respond to the changing demands of the environment (Way et al., 2024).

To delve deeper into the topic, it is necessary to analyze key terms that provide conceptual clarity and relevance within the research framework. First, the term effectiveness refers to a leader's ability to achieve objectives optimally, considering the available resources (Robinson et al., 2016). On the other hand, competencies encompass the skills, knowledge, and attitudes that allow a leader to respond adequately to environmental demands (Paguay, 2021). In military educational institutions, these competencies include strategic leadership, effective communication, conflict management, and adaptability to change (Fournier Guimbao, 2019).

Complementarily, effectiveness is associated with the outcomes achieved relative to the established objectives, evaluated both in terms of their impact on the organization and on the individuals involved (Ascón Villa et al., 2018). Thus, an effective leader is one who not only achieves organizational goals but also fosters a motivating and healthy environment (Calderón Arregui & Sánchez, 2023). In this context, leadership effectiveness is defined as the leader's ability to positively influence the achievement of goals and the development of their team, adapting to environmental dynamics.

Furthermore, analyzing the educational and military environments is fundamental to this research. The educational environment is characterized as a space for teaching and learning where academic and formative aspects converge (Amador Ortíz, 2018). However, in military institutions, this environment takes on a dual character by also integrating disciplinary elements and value formation. Thus, the military environment, defined by its hierarchical structure, strict discipline, and high-performance standards, demands leadership capable of ensuring results while fostering cohesion and commitment among its members (Calderón Arregui, 2023). In

summary, this work aims to contribute to the development of leadership strategies tailored to the specificities of the military-educational environment, providing a conceptual basis for future training programs and organizational policies.

Materials and methods

The methodological perspective adopted in this study was quantitative, focusing on the assessment of the self-perception of leadership styles among the directors of UFA-ESPE. This approach allowed for the identification of predominant leadership behaviors and the analysis of their relationships, framing the research as descriptive and correlational (Hernández-Sampieri & Mendoza, 2020; Medina et al., 2023).

Data collection was conducted using the CONLID-A questionnaire developed by Castro et al. (2007), designed to measure self-perception across three dimensions: task-oriented behaviors, relationship-oriented behaviors, and change-oriented behaviors. This instrument consists of 34 items evaluated on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree".

The target population comprised 104 directors at UFA-ESPE, who hold leadership roles such as rector, vice-rectors, extension sub-directors, heads of department, and program coordinators. Although the study initially aimed for a census of all directors, 70 participated, representing 67.3% of the total population. While this sample size was lower than the estimated 83 directors calculated for a 5% margin of error, it was sufficient to provide reliable results. The specific margin of error was recalculated for the 70 participants, yielding an approximate value of 6.73%, which remains acceptable for the 95% confidence level established in the design.

The study design was non-experimental, cross-sectional, and survey-based. Data were collected at a single point in time and analyzed to identify patterns and relationships among the evaluated dimensions. SPSS 22 software was used to process the data, performing descriptive analyses (means, standard deviations, medians, and modes), reliability analyses, and correlational and factor analyses (Pooper, 1980). The obtained Cronbach's Alpha was 0.987, confirming the high reliability of the questionnaire, in accordance with Bourque et al. (2020) and Calderón Arregui et al. (2023). Furthermore, Pearson correlations reflected positive and significant relationships among the leadership dimensions, highlighting their interconnection.

Finally, exploratory factor analysis (EFA) validated the unidimensional structure of the questionnaire, with high factor loadings across all dimensions (López & Gutiérrez, 2019). These findings reinforce the validity and reliability of the instrument, providing a solid methodological foundation for interpreting leadership perceptions in the evaluated context.

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

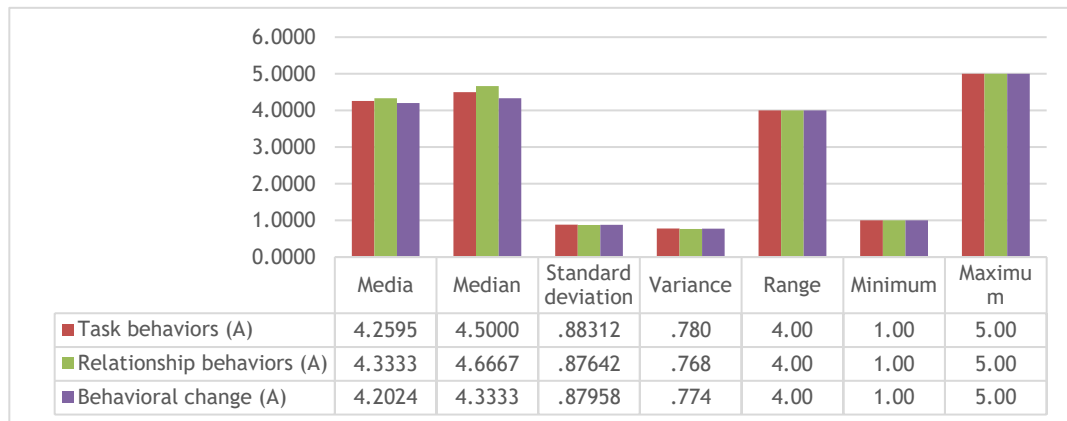| David Alexander Calderón Arregui | Marisol Josefina Godoy Mena | Adriana Marrero Fernández |

In this section, we present the findings from the analysis of the self-perception of leadership styles among the directors of UFA-ESPE, using the CONLID-A questionnaire. We analyze leadership behaviors across three key dimensions: tasks, relationships, and change. Additionally, we evaluate the reliability of the instrument and explore the correlations among these dimensions to validate the cohesion of the questionnaire.

Self-Perception of directors regarding their leadership behaviors

The self-perception of the directors regarding their leadership behaviors, as detailed in Figure 1, reveals a balanced and positive profile across the three analyzed dimensions: task-oriented, relationship-oriented, and change-oriented. This underscores the importance of leadership as a strategic element for organizational success in military educational environments.

Figure 1

Results of self-perception of leadership behaviors

	Media	Median	Standard deviation	Variance	Range	Minimum	Maximum
Task behaviors (A)	4.2595	4.5000	.88312	.780	4.00	1.00	5.00
Relationship behaviors (A)	4.3333	4.6667	.87642	.768	4.00	1.00	5.00
Behavioral change (A)	4.2024	4.3333	.87958	.774	4.00	1.00	5.00

Source: Author's own elaboration.

First, task-oriented behaviors present a mean score of 4.2595, categorizing them as very high. This result suggests that directors prioritize fundamental aspects such as planning, organization, and achievement of objectives. These characteristics are essential in a military context, where discipline and operational precision are foundational pillars. Furthermore, the low standard deviation indicates a homogeneous perception among the directors, suggesting a strong capacity to manage tasks effectively. This orientation is crucial not only to ensure the achievement of institutional goals but also to facilitate the execution of strategic projects.

On the other hand, relationship-oriented behaviors register the highest mean score of 4.3333, also placing them in the very high category. This result reflects a strong appreciation for interpersonal interactions, recognition of effort, and support for the work team. In the military educational environment, these behaviors gain particular relevance as they help balance hierarchical dynamics with the need to

foster an atmosphere of trust and motivation. Consequently, these skills not only strengthen team cohesion but also contribute to the efficient management of conflicts and the development of a positive organizational climate.
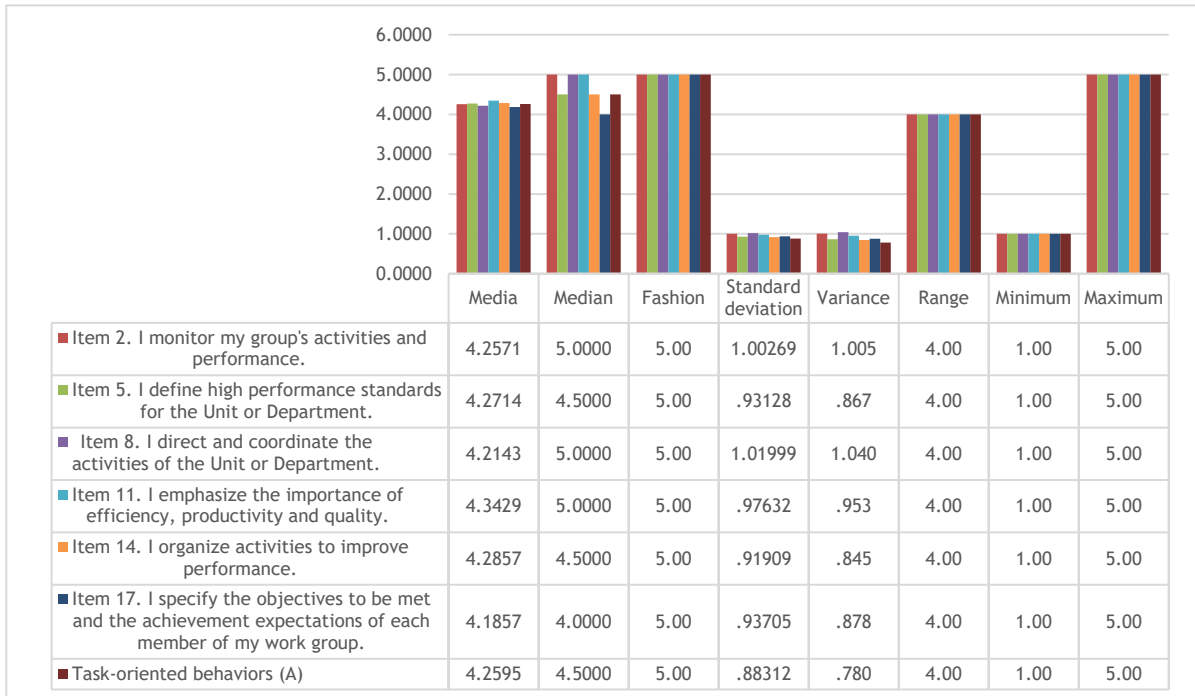
However, while each dimension stands out for its own merits, it is essential to interpret them interdependently. For instance, task orientation provides the necessary structure for efficient operations. Nonetheless, this must be complemented by a strong relationship orientation that fosters collaboration and trust among team members. Similarly, change orientation acts as an integrative element, facilitating the evolution of tasks and relationships to adapt to the challenges and opportunities present in a dynamic environment. In conclusion, the results highlight a positive and balanced self-perception among directors regarding their leadership behaviors. Nevertheless, their analysis in the context of military educational institutions emphasizes that organizational success depends on the coherent interaction of the three dimensions: tasks, relationships, and change.

Task-oriented behaviors

The self-perception of the directors regarding task-oriented behaviors reflects a highly positive and consistent view of their performance, particularly in key aspects such as efficiency and the achievement of specific goals, as shown in Figure 2. These results suggest that the directors see themselves as leaders focused on ensuring that activities and operational processes are executed effectively, which is critical in the structured and disciplined context of UFA-ESPE.

Figure 2

Results of self-perception of task-oriented behaviors

	Media	Median	Fashion	Standard deviation	Variance	Range	Minimum	Maximum
Item 2. I monitor my group's activities and performance.	4.2571	5.0000	5.00	1.00269	1.005	4.00	1.00	5.00
Item 5. I define high performance standards for the Unit or Department.	4.2714	4.5000	5.00	.93128	.867	4.00	1.00	5.00
Item 8. I direct and coordinate the activities of the Unit or Department.	4.2143	5.0000	5.00	1.01999	1.040	4.00	1.00	5.00
Item 11. I emphasize the importance of efficiency, productivity and quality.	4.3429	5.0000	5.00	.97632	.953	4.00	1.00	5.00
Item 14. I organize activities to improve performance.	4.2857	4.5000	5.00	.91909	.845	4.00	1.00	5.00
Item 17. I specify the objectives to be met and the achievement expectations of each member of my work group.	4.1857	4.0000	5.00	.93705	.878	4.00	1.00	5.00
Task-oriented behaviors (A)	4.2595	4.5000	5.00	.88312	.780	4.00	1.00	5.00

Source: Author's own elaboration.

On average, the directors report closely monitoring the activities and performance of their group, categorizing this behavior as very high. This monitoring, combined with the setting of high-performance standards, highlights the priority given to productivity and continuous improvement. Additionally, the direction and coordination of unit activities are also emphasized as key strengths, reflecting effective management and a leadership capacity focused on achieving strategic objectives.

The importance attributed to efficiency, productivity, and quality manifests in the concern for optimizing organizational performance. This approach not only ensures the fulfillment of operational goals but also reinforces the alignment of activities with institutional objectives. In this sense, the organization of tasks and the clear specification of goals and expectations are fundamental behaviors that allow for effective communication and ensure that all team members are aligned with collective goals.

In the military educational context, these behaviors acquire an additional dimension. The demand for precise and consistent results, combined with the need to manage diverse teams, requires leadership that prioritizes both performance and cohesion. The findings suggest that the directors of UFA-ESPE are capable of balancing these demands through structured and effective leadership practices, thereby strengthening the institution's ability to meet its academic and military objectives. In summary, the self-perception of directors regarding task-oriented behaviors indicates a strong alignment with highly effective leadership practices.
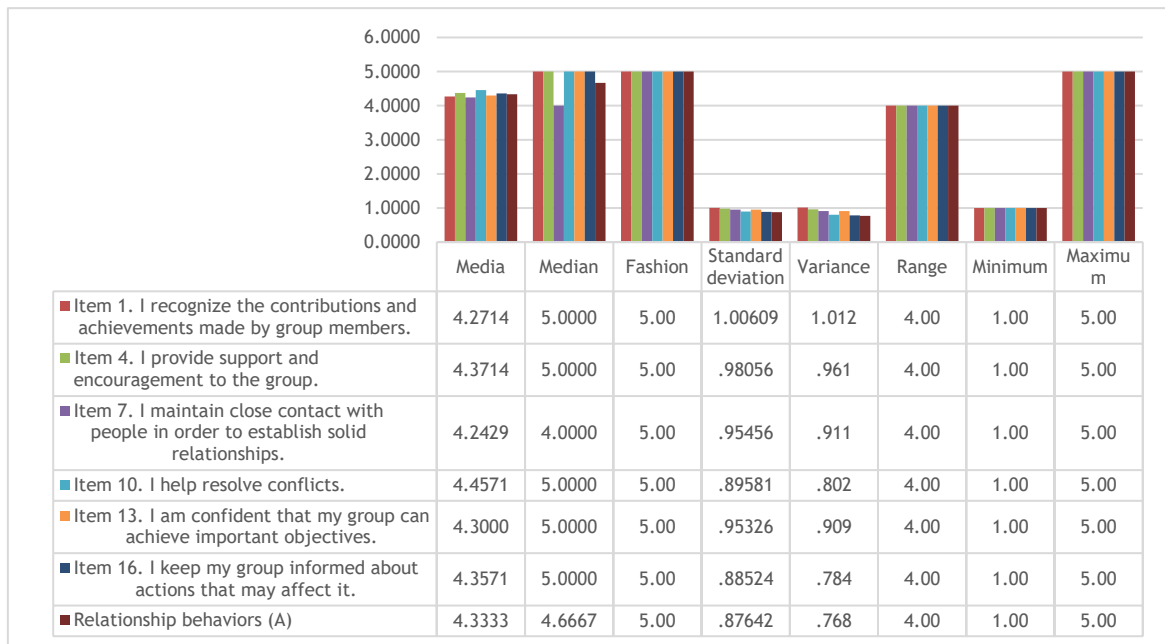
Relationship-oriented behaviors

The self-perception of the directors regarding relationship-oriented behaviors reveals an overall positive evaluation, in which they see themselves as leaders committed to key aspects such as recognition, emotional support, building strong relationships, conflict resolution, and effective communication. This pattern is evident through the high means and consistency in the medians and modes, reinforcing the perception that these directors tend to exhibit leadership behaviors focused on strengthening interpersonal relationships within their teams.

Statistically, most directors fall into the very high category, indicating that they perceive themselves as effective leaders in these aspects. In particular, the recognition of contributions (item 1) received a mean score of 4.2714, with a standard deviation of 1.00609, suggesting that, although there is variability in perceptions, there is a widespread trend toward positive self-assessment. This behavior is crucial in the context of military educational institutions, where the valuation of effort and performance is fundamental not only for maintaining staff motivation but also for ensuring an environment where effort and dedication are recognized as essential values within the hierarchy. Recognition, in this sense, serves as a key tool for maintaining high levels of morale and commitment in teams where discipline and collective work are essential for achieving objectives.

Figure 3

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Results of the self-perception of relationship-oriented behaviors

	Media	Median	Fashion	Standard deviation	Variance	Range	Minimum	Maximum
■ Item 1. I recognize the contributions and achievements made by group members.	4.2714	5.0000	5.00	1.00609	1.012	4.00	1.00	5.00
■ Item 4. I provide support and encouragement to the group.	4.3714	5.0000	5.00	.98056	.961	4.00	1.00	5.00
■ Item 7. I maintain close contact with people in order to establish solid relationships.	4.2429	4.0000	5.00	.95456	.911	4.00	1.00	5.00
■ Item 10. I help resolve conflicts.	4.4571	5.0000	5.00	.89581	.802	4.00	1.00	5.00
■ Item 13. I am confident that my group can achieve important objectives.	4.3000	5.0000	5.00	.95326	.909	4.00	1.00	5.00
■ Item 16. I keep my group informed about actions that may affect it.	4.3571	5.0000	5.00	.88524	.784	4.00	1.00	5.00
■ Relationship behaviors (A)	4.3333	4.6667	5.00	.87642	.768	4.00	1.00	5.00

Source: Author's own elaboration.

On the other hand, emotional support (item 4), with a mean of 4.3714 and a standard deviation of 0.72453, also reflects a tendency to perceive leadership as providing emotional backing to team members. The high medians and modes of 5.00 indicate cohesion in the perception of directors as figures of emotional support, which is particularly relevant in military educational institutions. In such environments, stress, constant demands, and high expectations are prevalent factors; thus, a leader capable of providing emotional support and being perceived as approachable can be crucial for the stability and well-being of the team, which in turn contributes to a favorable organizational climate.

Regarding the maintenance of strong relationships (item 7), the mean of 4.2429, accompanied by a standard deviation of 1.01664, indicates that directors largely perceive themselves as skilled at building lasting relationships within the team. Although variability in responses is a factor to consider, the high medians and modes reinforce the idea that interpersonal relationships in the leadership of directors are a priority. In military educational institutions, the ability to establish solid relationships is a key component for ensuring cohesion and collaborative work, especially when hierarchies are strict and group unity is essential for the success of educational and operational missions.

Conflict resolution (item 10), with a mean of 4.4571 and a standard deviation of 1.01194, stands out as a crucial competency within the leadership structure. The fact that directors perceive themselves as effective in conflict management has direct implications for the stability of the work environment. In a military educational context, where tensions can arise due to the nature of the work and

hierarchical differences, the leaders' ability to manage and resolve conflicts is vital for maintaining a harmonious work environment focused on common objectives. The high medians and modes of 5.00 suggest that these directors believe they possess the skills to handle conflict situations constructively, contributing to problem resolution and strengthening group unity.

The perception of trust in the team (item 13), with a mean of 4.3000 and a standard deviation of 1.12533, suggests that the directors believe their teams are capable of achieving significant objectives. Mutual trust is essential in any organization, but in the context of military educational institutions, where teamwork is a key component for success, this perception of trust can be a determining factor in overall performance. The high medians and modes of 5.00 indicate that the directors see themselves as leaders who foster trust within their teams, facilitating cooperation and the achievement of established goals.

Finally, effective communication (item 16), with a mean of 4.3571 and a standard deviation of 0.80642, stands out as a vital competency in leadership, especially in environments where clarity and precision in information are fundamental. The high medians and modes of 5.00 suggest that the directors are perceived as transparent leaders, capable of keeping their teams informed about decisions and actions that may affect their development. In a military context, effective communication not only facilitates the flow of relevant information but also ensures that all team members are aligned regarding the objectives and strategies to be followed.
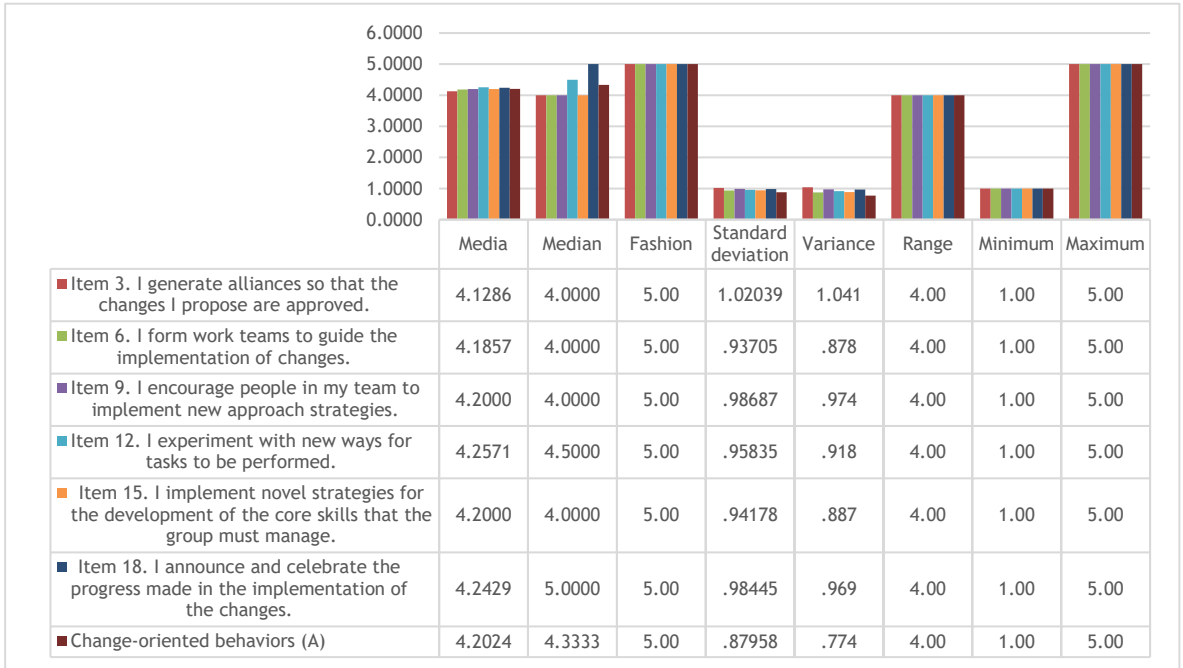
In summary, the directors demonstrate a positive and coherent self-perception regarding relationship-oriented behaviors. Although there are some variations in responses, the general trends suggest a leadership focus on developing a cohesive environment based on recognition, emotional support, trust, conflict resolution, and effective communication. In military educational institutions, these leadership competencies are crucial not only for fostering a positive organizational climate but also for ensuring the achievement of educational and operational objectives in a demanding and disciplined environment.

Change-oriented behaviors

The self-perception of directors regarding change-oriented behaviors, as indicated in Figure 4, reveals a generally positive trend in various key areas, suggesting that they see themselves as effective leaders in the implementation and management of changes within the group. These behaviors are classified as very high and have significant implications for the context of military educational institutions.

Figure 4

Results of self-perception regarding change-oriented behaviors

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	Media	Median	Fashion	Standard deviation	Variance	Range	Minimum	Maximum
Item 3. I generate alliances so that the changes I propose are approved.	4.1286	4.0000	5.00	1.02039	1.041	4.00	1.00	5.00
Item 6. I form work teams to guide the implementation of changes.	4.1857	4.0000	5.00	.93705	.878	4.00	1.00	5.00
Item 9. I encourage people in my team to implement new approach strategies.	4.2000	4.0000	5.00	.98687	.974	4.00	1.00	5.00
Item 12. I experiment with new ways for tasks to be performed.	4.2571	4.5000	5.00	.95835	.918	4.00	1.00	5.00
Item 15. I implement novel strategies for the development of the core skills that the group must manage.	4.2000	4.0000	5.00	.94178	.887	4.00	1.00	5.00
Item 18. I announce and celebrate the progress made in the implementation of the changes.	4.2429	5.0000	5.00	.98445	.969	4.00	1.00	5.00
Change-oriented behaviors (A)	4.2024	4.3333	5.00	.87958	.774	4.00	1.00	5.00

Source: Author's own elaboration.

In these institutions, generating strategic alliances to approve proposed changes is fundamental for ensuring acceptance and support for initiatives that promote innovation and continuous improvement in a discipline and hierarchy-driven environment. With a mean of 4.1286, this area indicates that directors have the capability to build the necessary coalitions to overcome internal resistance and consolidate support. Given that this aspect is essential in a military environment where strategic decisions depend on hierarchical consensus, its classification as high highlights the importance of further strengthening this skill.

Moreover, the formation of work teams to guide the implementation of changes (mean of 4.1857) reflects a collaborative approach that can foster cohesion and commitment among personnel. In military educational institutions, where teamwork is crucial for achieving common objectives, this skill is vital for leading initiatives that positively impact the organizational climate.

Regarding the promotion of new strategies by the team (mean of 4.20), classified as very high, this result underscores the willingness of directors to encourage innovative approaches. This aspect is particularly relevant in military educational institutions, where directors must balance tradition and structure with the need to adapt to new challenges, such as the implementation of modern technologies or the updating of pedagogical methods.

The experimentation with new ways of performing tasks (mean of 4.2571), also classified as very high, suggests leadership that values creativity and innovation in everyday processes. In the military context, this behavior is essential for preparing teams for uncertain scenarios, allowing military educational institutions to remain

at the forefront of teaching and management strategies.

On another note, the implementation of innovative strategies for developing core skills (mean of 4.20) demonstrates directors' commitment to human talent growth. In military educational institutions, this aspect holds special value, as the development of key skills not only impacts academic performance but also prepares students to assume leadership roles in both civil and military contexts.

Finally, the act of announcing and celebrating progress in the implementation of changes (mean of 4.2429), classified as very high, reinforces a culture of recognition and motivation, which is essential in military contexts to consolidate achievements and foster team spirit. In conclusion, the statistical results reflect favorable and consistent trends in directors' self-perception regarding change-oriented behaviors.

Analysis of correlation among leadership behaviors

The correlation among task-oriented, relationship-oriented, and change-oriented leadership behaviors reflects a close and significant relationship among these three dimensions (Table 1). First, the relationship between task-oriented and relationship-oriented behaviors shows a very strong positive correlation ($r = 0.955$, $p < 0.01$). This indicates that as directors prioritize planning, organization, and goal achievement, they also tend to excel in building strong interpersonal relationships, such as recognizing achievements and providing support to their teams. This connection is especially important in military educational environments, where operational efficiency and a climate of trust and motivation must go hand in hand to achieve strategic objectives.

Table 1

Correlation matrix of the CONLID-A instrument (N=70)

		1	2	3
1. task-oriented behaviors (A)	Pearson Correlation	1	,955**	,975**
	Significance (two-tailed)		,000	,000
2. relationship-oriented behaviors (A)	Pearson Correlation	,955**	1	,950**
	Significance (two-tailed)	,000		,000
3. change-oriented behaviors (A)	Pearson Correlation	,975**	,950**	1
	Significance (two-tailed)	,000	,000	

Note. **. Correlation is significant at the 0.01 level (two-tailed).

Source: Author's own elaboration.

On the other hand, the relationship between task-oriented behaviors and change-oriented behaviors shows the highest correlation in the analysis ($r = 0.975$, $p < 0.01$). This suggests that directors who are effective in task management also tend to demonstrate a significant ability to lead change processes. In this regard, rigorous planning and efficient execution of tasks appear to be fundamental pillars for successfully implementing strategic transformations. In the context of UFA-ESPE,

this relationship reinforces the importance of leadership that focuses not only on daily operations but also on driving innovation and adaptability in the face of environmental challenges.

Additionally, the relationship between relationship-oriented behaviors and change-oriented behaviors also shows a very high positive correlation ($r = 0.950$, $p < 0.01$). This means that directors who value interpersonal interactions and promote a climate of trust within their teams are equally effective at managing organizational transformation processes. This link is crucial in military educational institutions, where transformations can generate resistance that can only be overcome through leadership that fosters cohesion and alignment with common goals.

In conclusion, the correlation analysis highlights that the three dimensions of leadership are deeply interrelated, and success in one dimension enhances the others. Therefore, a balanced leadership approach that combines a focus on tasks, relationships, and change becomes a fundamental requirement for addressing challenges and seizing opportunities in military educational institutions. This integrated leadership model not only enables efficient management of daily operations but also successfully leads organizational transformations.

Reliability analysis of the CONLID-A instrument (N=70)

The evaluation of the Self-Perception Scale of Leadership Behaviors for Directors (CONLID A), composed of 34 items, reveals highly positive results regarding its reliability. The overall reliability coefficient of the instrument, expressed through Cronbach's Alpha, reaches an impressive value of 0.987. This exceptionally high figure indicates extraordinary internal consistency in the responses to the questionnaire items, suggesting outstanding reliability in measuring self-perceptive leadership behaviors (Table 2).

Table 2

Reliability statistics for the CONLID-A instrument (N=70)

Measurement instrument	Number of items	Cronbach's Alpha	Cronbach's Alpha if item deleted
CONLID A	18	0,987	0,987

Source: Author's own elaboration.

Additionally, an analysis of Cronbach's Alpha if an item is deleted shows that even when any specific item is removed, the reliability coefficient remains unchanged at 0.987. This consistency suggests that each item contributes equally to the overall reliability of the scale, and the removal of any particular element does not significantly affect the internal coherence of the instrument.

In summary, the results of the reliability tests strongly support the utility and reliability of the CONLID-A Scale for measuring self-perceptions of leadership behaviors among directors. The exceptionally high internal consistency, reflected in Cronbach's Alpha, indicates that this instrument is highly reliable and accurate in assessing leadership behaviors, providing a robust tool for research and evaluations aimed at understanding and measuring leadership perceptions in executive contexts.

KMO and Bartlett's tests for the CONLID-A instrument (N=70)

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The results obtained from the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity are essential for evaluating the validity of the leadership behavior scale (Pizarro & Martínez, 2020). The KMO measure, which stands at 0.779, suggests a moderate adequacy of the sample for conducting a factor analysis (Table 3).

Although it does not reach the optimal level of 0.8, this value indicates that there is sufficient correlation among the variables to proceed with the analysis. Furthermore, Bartlett's test of sphericity, with a chi-square statistic of 371.091 and a significance value of 0.000, reveals that there are significant correlations among the variables, leading to the rejection of the null hypothesis that the correlation matrix is an identity matrix.

Table 3

KMO and Bartlett's tests for the CONLID-A instrument (N=70)

Measure of sampling adequacy (Kaiser-Meyer-Olkin)		0,779
Bartlett's test of sphericity	Approx. Chi-Square	371,091
	df	3
	Sig.	0,000

Source: Author's own elaboration.

Despite the moderate adequacy of the data according to the KMO measure, the results support the validity of the scale by demonstrating significant correlations among the variables. The application of factor analysis techniques is justified, as the Bartlett test confirms significant correlation patterns among the dimensions of the evaluated leadership behaviors. These preliminary findings suggest that the scale had an adequate data foundation to explore the underlying structure of leadership behaviors and provide a deeper understanding of its dimensions.

Exploratory factor analysis of the CONLID-A instrument (N=70)

The exploratory factor analysis (EFA) conducted to validate the leadership behavior scale (CONLID) with a sample of 70 directors yields notable results (Table 4).

Table 4

EFA - Rotated component matrix of the CONLID-A instrument (N=70)

	Component
	1
Task-oriented behaviors (A)	0,990
Relationship-oriented behaviors (A)	0,982
Change-oriented behaviors (A)	0,988
Extraction method: principal component analysis.	
a. 1 extracted components.	

Source: Author's own elaboration.

The rotated component matrix reveals a single significant component, evidenced by the high factor loadings of the three evaluated dimensions: task-

oriented behaviors (A) with a loading of 0.990, relationship-oriented behaviors (A) with a loading of 0.982, and change-oriented behaviors (A) with a loading of 0.988.

The use of the principal component analysis extraction method and the identification of a single extracted component suggest a coherent convergence of the dimensions of leadership behaviors into a unified structure. This finding supports the validity of the CONLID scale, indicating that task-oriented, relationship-oriented, and change-oriented behaviors are interrelated and form a cohesive construct within the evaluated leadership context.

This study reveals significant findings regarding the self-perception of leadership behaviors among the directors at UFA-ESPE. The results indicate that the directors perceive themselves as effective leaders in the key dimensions of task-oriented, relationship-oriented, and change-oriented behaviors. These findings reflect an integrated leadership style that balances organizational objectives with team well-being, a critical approach in the context of military educational institutions where rigid hierarchical structures coexist with the need for adaptability in a dynamic educational environment.

First, the high reliability of the CONLID-A questionnaire, evidenced by a Cronbach's alpha coefficient of 0.987, highlights the methodological robustness of the study. This result not only validates the instrument for measuring leadership behaviors but also reinforces its applicability in military-educational environments characterized by rigorous standards of excellence and discipline. The correlation analyses among the dimensions also strengthen the validity of the instrument, demonstrating the critical interrelationship among the leadership competencies necessary in such institutions.

Regarding task-oriented behaviors, the mean of 4.2595 indicates a significant focus on planning and achieving organizational objectives. This result underscores the importance of efficiency and clarity in operational management, which are fundamental aspects in institutions like UFA-ESPE, where leaders must ensure both academic excellence and compliance with strict military regulations. These findings align with previous studies highlighting task-based leadership as an essential factor in achieving strategic goals in high-demand environments (Bass & Avolio, 1994; Lupano & Castro, 2006; Fournier, 2019; Calderón Arregui & Sánchez, 2023).

In terms of relationship-oriented behaviors, the mean of 4.3333 emphasizes the value placed on team cohesion, interpersonal recognition, and emotional support. In a military-educational environment, these competencies are essential for balancing hierarchical authority with the development of trust and collaboration. This finding highlights the relevance of transformational leadership in motivating personnel to exceed expectations, as indicated by contemporary leadership theories (Northouse, 2021).

On the other hand, change-oriented behaviors, with a mean of 4.2024, reflect the perception of directors as proactive agents in managing organizational transformations. In a context like UFA-ESPE, where technological, educational, and social changes are constant, this capability is essential for implementing innovations that enhance institutional competitiveness.

In conclusion, the study's results not only confirm a positive self-perception

among the directors at UFA-ESPE regarding their leadership behaviors but also provide a framework for understanding and strengthening leadership in military educational institutions. This study highlights the need for a balanced approach between operational efficiency, relational cohesion, and adaptability to change, offering a solid foundation for future research and practical applications in leadership development within these complex environments.

Conclusions

The study on the self-perception of leadership behaviors among the directors of UFA-ESPE has revealed significant findings that contribute to the understanding of leadership in military educational institutions. The results indicate that the directors perceive themselves as effective leaders in three key dimensions of leadership: task-oriented, relationship-oriented, and change-oriented. This comprehensive approach to leadership, which encompasses task management, interpersonal relationship building, and adaptability, is essential for addressing the specific challenges of the educational-military context.

First, it is observed that the directors place a high value on task-oriented behaviors, reflecting the need to maintain high levels of efficiency and goal achievement in a demanding environment like that of UFA-ESPE. Furthermore, the high regard for relationship-oriented behaviors suggests that, despite the hierarchical nature of military institutions, the directors seek to promote team cohesion and emotional well-being. Finally, the positive perception of change-oriented behaviors underscores the importance of adaptability and proactivity in managing institutional transformation processes.

One of the main inferences of this study is that, within the specific context of military educational institutions, effective leadership should not be understood as a collection of isolated skills but rather as an integrated approach that allows directors to balance the demands of operational efficiency, interpersonal cohesion, and innovation. This finding suggests that the training of directors should be comprehensive, developing skills in both task management and people management, as well as in facilitating change.

On the other hand, the limitations of the study, such as the sample size and the cross-sectional design, open new avenues for research. It is recommended that future studies explore the dynamics of leadership in military educational institutions with larger samples and longitudinal designs that allow for the analysis of the evolution of leadership behaviors over time and across different contexts. Additionally, it would be pertinent to investigate how differences in educational and military contexts can influence the perception and effectiveness of leadership styles in these environments.

References

Ahmad, B., Shafique, I., Qammar, A., Ercek, M., & Kalyar, M. N. (2024). Prompting green product and process innovation: examining the effects of green

transformational leadership and dynamic capabilities. *Technology Analysis & Strategic Management*, 36(6), 1111-1123. https://doi.org/10.1080/09537325.2022.2071692

Amador Ortíz, C. M. (2018). Ventajas del liderazgo distribuido en instituciones de educación superior / Advantages of distributed leadership in institutions of higher education. *RIDE Revista Iberoamericana Para La Investigación y El Desarrollo Educativo*, 8(15), 817–832. https://doi.org/10.23913/ride.v8i15.322

Anwar, S., & Saraih, U. N. (2024). Digital leadership in the digital era of education: enhancing knowledge sharing and emotional intelligence. *International Journal of Educational Management*, 38(6), 1581–1611. https://doi.org/https://doi.org/10.1108/IJEM-11-2023-0540

Ascón Villa, J. E., García González, M., & Pedraza Dubernal, C. I. (2018). Las habilidades directivas en las instituciones de educación superior. Diseño estratégico con enfoque de liderazgo. *REVISTA CIENTÍFICA ECOCIENCIA*, 5(2), 1–14. https://doi.org/10.21855/ecociencia.52.61

Assoratgoon, W., & Kantabutra, S. (2023). Toward a sustainability organizational culture model. *Journal of Cleaner Production*, 400, 136666. https://doi.org/10.1016/j.jclepro.2023.136666

Bass, B. M., & Avolio, B. J. (1994). Improving organizational effectiveness through transformational leadership. In *Improving organizational effectiveness through transformational leadership*. Sage Publications, Inc.

Bourque, J., Doucet, D., LeBlanc, J., Dupuis, J., & Nadeau, J. (2020). L'alpha de Cronbach est l'un des pires estimateurs de la consistance internet: une étude de simulation. *Revue Des Sciences de l'éducation*, 45(2), 78–99. https://doi.org/10.7202/1067534ar

Calderón Arregui, D. A. (2023). Estilos de liderazgo y clima organizacional: un estudio correlacional en la Escuela de Ingeniería Militar "Gral. Guillermo Rodríguez Lara." *Killkana Social*, 7(1), 53–68. https://doi.org/10.26871/killkanasocial.v7i1.1057

Calderón Arregui, D. A., Godoy, M., & Marrero, A. (2023). Validating a leadership style scale in a military higher education institution: Im- plications for research and practice Validación de una escala de estilos de liderazgo. *Revista Killkana Sociales*, 7(3), 61–76. https://doi.org/10.26871/killkanasocial.v7i3.1423

Calderón Arregui, D. A., Godoy Mena, M. J., & Marrero, A. (2023). Liderazgo y clima organizacional en la educación superior militar: Enfoque sociológico, avances sobre un estudio correlacional en la Universidad de las Fuerzas Armadas-ESPE. *Revista de Seguridad y Defensa*, 08(1), 11–24. https://doi.org/10.24133/RCSD.VOL08.N01.2023.01

Calderón Arregui, D. A., Godoy Mena, M. J., & Marrero Fernández, A. (2023). Validation of an organizational climate scale in a military higher education institution : implications foR. *Chakiñan, Revista De Ciencias Sociales Y*

Humanidades, *22*, 128–144. https://doi.org/https://doi.org/10.37135/chk.002.22.08

Calderón Arregui, D. A., & Sánchez Gordon, W. H. (2023). El Camino hacia el Liderazgo Militar de Excelencia: Estrategias para formar Líderes Efectivos en la Escuela Superior Militar "Eloy Alfaro." *Revista de Ciencias de Seguridad y Defensa*, *08*(3), 27–44. https://doi.org/10.24133/RCSD.VOL08.N03.2023.02

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

Castro Solano, A., Lupano, M., Benatuil, D., & Nader, M. (2007). *Teoría y Evaluación del Liderazgo*. Paidos. https://acortar.link/RM308X

Chatterjee, S., Chaudhuri, R., Vrontis, D., & Giovando, G. (2023). Digital workplace and organization performance: Moderating role of digital leadership capability. *Journal of Innovation & Knowledge*, 8(1), 100334. https://doi.org/10.1016/j.jik.2023.100334

Demircioglu, M. A., & Chowdhury, F. (2021). Entrepreneurship in public organizations: the role of leadership behavior. *Small Business Economics*, *57*(3), 1107–1123. https://doi.org/10.1007/s11187-020-00328-w

Fournier Guimbao, J. (2019). Competencias del líder militar futuro y nuevos instrumentos formativos para mejorarlas. In *Cómo preparar el liderazgo militar futuro*. Centro Superior de Estudios de la Defensa Nacional CESEDEN. http://www.ieee.es/Galerias/fichero/docs_trabajo/2020/DT05_Liderazgo.pdf

García-Guiu, C., & Pastor Álvarez, A. (2022). Liderazgo militar con «ñ»: aproximaciones científicas psicosociales en España. *Documento Marco IEEE 02/2022*, 1–23. https://www.ieee.es/Galerias/fichero/docs_marco/2022/DIEEEM02_2022_CARGAR_Liderazgo.pdf

Geraldo Campos, L. A., Mera Sánchez, A. R., & Rocha Perez, E. (2020). Importancia de los estilos de liderazgo: un abordaje de revisión teórica. *Apuntes Universitarios*, *10*(4), 156–174. https://doi.org/10.17162/au.v10i4.501

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

Hemphill, J. K., & Coons, A. E. (1957). *Development of the Leader Behavior Description Questionnaire". In R. M. Stodgill and A. E. Coons (Eds.), Leader Behavior: Its Description and Measurement. Columbus, Ohio: Bureau of Business Research, Ohio State University, 6-38.*

Hernández-Sampieri, R., & Mendoza, C. (2020). *Metodología de la investigación: las rutas cuantitativa, cualitativa y mixta*. McGraw Hill. https://acortar.link/DH3B4c

Huerta Riveros, P., & Muñoz Fritis, C. (2020). Calidad en instituciones de educación superior: Estudio exploratorio del liderazgo y la cultura académica/ Quality in higher education institutions: Exploratory study of leadership and academic culture. *Revista de Ciencias Sociales*, 433–449. https://doi.org/10.31876/rcs.v26i4.34672

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

Lasso Quintero, M. I., Maya Duran, S. E., & Alvarado, O. (2019). El liderazgo: un desafío para las IES del departamento del Cauca. *Espirales Revista Multidisciplinaria de Investigación*, *3*(31), 50–64. https://doi.org/10.31876/er.v3i31.692

Leso, B. H., Cortimiglia, M. N., & Ghezzi, A. (2023). The contribution of organizational culture, structure, and leadership factors in the digital transformation of SMEs: a mixed-methods approach. *Cognition, Technology & Work*, 25(1), 151-179. https://doi.org/10.1007/s10111-022-00714-2

Lupano Perugini, M. L., & Castro Solano, A. (2006). Estudios sobre el liderazgo. Teorías y evaluación. *Psicodebate*, *6*(0), 107. https://doi.org/10.18682/pd.v6i0.444

Márquez Miramontes, B. L., & Chávez Villegas, A. (2021). El cumplimiento de las metas y la motivación del personal como detonantes de la competitividad en la educación superior. *Academic Journal of Studies in Society Sciences and Technologies*, *2*(3), 1-13. http://cathi.uacj.mx/bitstream/handle/20.500.11961/19795/58-Article Text-181-1-10-20210901.pdf?sequence=1&isAllowed=y

McCauley, C. D., & Palus, C. J. (2021). Developing the theory and practice of leadership development: A relational view. *The Leadership Quarterly*, 32(5), 101456. https://doi.org/10.1016/j.leaqua.2020.101456

Medina Romero, M. Á., Hurtado Tiza, D. R., Muñoz Murillo, J. P., Ochoa Cervantez, D. O., & Izundegui Ordóñez, G. (2023). Método mixto de investigación: Cuantitativo y cualitativo. In *Método mixto de investigación: Cuantitativo y cualitativo* (Issue July). https://doi.org/10.35622/inudi.b.105

Moscoso Bernal, S. A., & Calderón Arregui, D. A. (2023). Universidad Glonacal: Retos, tendencias y propuesta de modelo de gestión. *Revista Ciencias Pedagógicas e Innovación*, *11*(2), 39–57. https://doi.org/10.26423/rcpi.v11i2.692

Nader, M., & Castro Solano, A. (2009). Relación entre los estilos de liderazgo, valores y cultura organizacional: Un estudio con líderes civiles y militares. *Anuario de Psicología*, *40*(2), 237–254. https://www.raco.cat/index.php/AnuarioPsicologia/article/view/143108

Northouse, P. G. (2021). *Leadership: Theory and Practice* (9th ed.). SAGE Publications. https://acortar.link/HgUISB

O'Connor, F. G., & Kearney, F. H. (2023). Leadership Lessons Learned from the Military. *Clinics in Sports Medicine*, *42*(2), 301–315. https://doi.org/https://doi.org/10.1016/j.csm.2022.11.003

Paguay, F. W. (2021). Competencias de liderazgo asociadas a la gestión del clima laboral: caso Universidad Politécnica Estatal del Carchi. *Espacios*, *42*(23), 38–51. https://doi.org/10.48082/espacios-a21v42n21p03

Pastor-Álvarez, A., Molero-Alonso, F., & Moriano-León, J. (2021). Influencia del liderazgo auténtico en el estado emocional de militares desplegados en operaciones en el exterior: estudio de la moral como variable mediadora. *Sanidad Militar*, *77*(2), 73–80. https://doi.org/10.4321/s1887-85712021000200002

Pizarro Romero, K., & Martínez Mora, O. (2020). Análisis factorial exploratorio mediante el uso de las medidas de adecuación muestral kmo y esfericidad de bartlett para determinar factores principales. *Journal Of Science and Research*, *5*, 21. https://revistas.utb.edu.ec/index.php/sr/article/view/1046

Polatcan, M. (2023). The Influence of Leadership Self-efficacy on College Students' Leadership Practice: The Mediating Role of Motivation to Lead. *International Journal of Educational Leadership and Management*, *11*(2), 138–166. https://doi.org/10.17583/ijelm.9551

Pooper, K. (1980). La lógica en la investigación científica. In *Archivos de Cardiología de México* (Vol. 86, Issue 2). https://doi.org/10.1016/j.acmx.2016.01.006

Rivera Gutiérrez, E., & Higuera Zimbrón, A. (2022). Aproximación al liderazgo educativo en instituciones de educación superior: Caso de estudio. *Revista Internacional de Aprendizaje*, *9*(1), 11–23. https://doi.org/10.18848/2575-5544/CGP/v09i01/11-23

Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2016). El Impacto del Liderazgo en los Resultados de los Estudiantes: Un Análisis de los Efectos Diferenciales de los Tipos de Liderazgo. *REICE. Revista Iberoamericana Sobre Calidad, Eficacia y Cambio En Educación*, *12*(4), 13–40. https://doi.org/10.15366/reice2014.12.4.001

Solano, G., Abebe, M. A., & Acharya, K. (2024). CEO military experience and corporate restructuring strategies. *Journal of Business Research*, *182*, 114808. https://doi.org/https://doi.org/10.1016/j.jbusres.2024.114808

Srivastava, A. P., Shree, S., & Agarwal, S. (2021). Does authentic leadership develop inclusive classrooms: a model examination? *International Journal of Educational Management*, *36*(4), 495–514. https://doi.org/https://doi.org/10.1108/IJEM-07-2020-0338

Stogdill, R. M., Goode, O. S., & Day, D. R. (1963). The leader behavior of corporation presidents. *Personnel Psychology*, *16*(2), 127–132. https://doi.org/10.1111/j.1744-6570.1963.tb01261.x

Torres, L. L. (2022). School organizational culture and leadership: Theoretical trends and new analytical proposals. *Education sciences*, 12(4), 254. https://doi.org/10.3390/educsci12040254

Uhl-Bien, M. (2021). Complexity leadership and followership: Changed leadership in a changed world. *Journal of Change Management*, 21(2), 144-162. https://doi.org/10.1080/14697017.2021.1917490

Wagner, W. J., van Putten, S., & Rauscher, W. (2022). Professional military instructor identity in the South African National Defence Force. *Scientia Militaria*, *49*(2). https://doi.org/10.5787/49-2-1246

Way, D. P., Nahata, L., Gerhardt, C., Martin, D. R., Carrau, R. L., & Satiani, B. (2024). Leadership Development and Its Association With Retention of Surgical Versus Nonsurgical Faculty at a Large Academic Health Center. *Journal of Surgical Research*, *303*, 173–180. https://doi.org/https://doi.org/10.1016/j.jss.2024.09.011

Whyte, J., Naderpajouh, N., Clegg, S., Matous, P., Pollack, J., & Crawford, L. (2022). Project leadership: A research agenda for a changing world. *Project Leadership and Society*, 3, 100044. https://doi.org/10.1016/j.plas.2022.100044

Yukl, G. (2002). Leadership in Organizations. In U. Sadd (Ed.), *Prentice Hall* (5th Editio).

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Declaration of author responsibility

David Alexander Calderón Arregui 1: Conceptualization, Data Curation, Formal Analysis, Research, Methodology, Resources, Software, Supervision, Validation/Verification, Visualization, Writing/original draft, and Writing, review and editing.
Marisol Josefina Godoy Mena 2: Research, Methodology, Software, Supervision, Validation/Verification, Writing/original draft and Writing, review and editing.
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