

ORIGINAL ARTICLE

Procedure for the Management of Recruitment and Selection of Personnel in the Electric Company of Sancti-Spíritus

Procedimiento para la gestión del reclutamiento y selección del personal en la Empresa Eléctrica Sancti-Spíritus

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Abstract

This study addresses the shortcomings identified in the recruitment and selection process at the Sancti-Spíritus Electric Company. It proposes a structured procedure comprising four stages and ten steps, based on a literature review, an empirical diagnosis, and validation through expert judgment. The procedure has potential for adaptation and application in other companies within the electricity sector. The study drew on theoretical methods—historical-logical, analytical-synthetic, inductive-deductive, and dialectical-materialist—and empirical methods such as surveys, interviews, document review, the Delphi method, and the Ishikawa diagram. Its application at the Central Office was associated with favorable changes in recruitment time, profile-job fit, satisfaction with onboarding, and staff turnover, supporting the practical usefulness of the proposal for human resource management.

Keywords recruitment, personnel selection, human resource management

Resumen

El presente estudio aborda las deficiencias identificadas en el proceso de reclutamiento y selección del personal en la Empresa Eléctrica Sancti-Spíritus. Se propone un procedimiento estructurado en cuatro etapas y diez pasos, fundamentado en una revisión bibliográfica, un diagnóstico empírico y la validación mediante criterio de expertos, con potencial de adaptación y aplicación en otras empresas del sector eléctrico. El estudio se sustentó en métodos teóricos —histórico-lógico, analítico-sintético, inductivo-deductivo y dialéctico-materialista— y métodos empíricos como encuestas, entrevistas, revisión documental, método Delphi y diagrama de Ishikawa. Su aplicación en la Oficina Central se asoció con cambios favorables en el tiempo de reclutamiento, el ajuste perfil-puesto, la satisfacción con la incorporación y la rotación del personal, lo que respalda la utilidad práctica de la propuesta para la gestión de recursos humanos.

Palabras clave reclutamiento, selección del personal, gestión de recursos humanos.

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Introduction

In the global context, current trends in human talent management reflect the influence of digitalization, artificial intelligence, and accelerated globalization. Reports such as Deloitte (2024) and Mercer (2025), together with recent academic research on AI-enabled recruitment and selection (Hunkenschroer & Luetge, 2022), highlight challenges related to technological change, ethical management practices, employee well-being, and the need for upskilling and reskilling programs. These transformations have redefined the role of human resources departments, which increasingly participate as strategic partners in creating sustainable organizational capabilities.

These perspectives are complemented by recent research showing that contemporary selection systems must combine efficiency with fairness, transparency, and evidence-based decision-making. Studies on person-organization fit emphasize that compatibility between individuals and organizational contexts remains relevant, while also warning against simplistic uses of fit in hiring decisions (Kristof-Brown et al., 2023). Likewise, developments in machine learning applied to personnel selection illustrate both the opportunities and the methodological precautions required when incorporating data-driven tools into recruitment processes (Campion & Campion, 2023).

In Latin America, human talent management has become a key factor in addressing economic and social volatility, and competency-based approaches have had a notable influence on recruitment and selection practices in the region (Alles, 2016). In Cuba, the evolution of people management has progressively moved from traditional personnel administration toward more comprehensive approaches such as strategic human resource management and integrated human capital management. This trajectory is reflected in the Cuban system of integrated human capital management and in the organizational practices associated with the NC 3000 family of standards (Hernández Darías et al., 2011).

The evolution of recruitment and selection procedures reflects a shift from foundational approaches focused on the objective assessment of individual aptitudes to contemporary models based on competencies and organizational strategy. Münsterberg's (1913) early work in industrial psychology addressed the scientific study of vocational fitness and worker selection. Later, Dunnette (1966) systematized personnel selection and placement around the assessment of individual characteristics and job requirements, providing an important foundation for person-job matching in selection practice.

Spencer and Spencer's (1993) competency model marked a turning point by distinguishing between different levels of competencies and consolidating a competency-based approach to human resource practices. This perspective has subsequently been incorporated into widely used human resource management frameworks, including those developed by Dessler (2021), Chiavenato (2017), and the Cuban model of integrated human capital management.

In Latin America, Alles (2016) operationalized the competency-based approach through practical methodologies for human resource management. At the same time, selection research has continued to emphasize the predictive value of structured assessment techniques and the strategic character of personnel selection (Salgado & Moscoso, 2008). More recent developments incorporate artificial intelligence, machine learning, and people analytics into selection decisions, while stressing the need for methodological rigor, explainability, fairness, and human oversight (Hunkenschroer & Luetge, 2022; Campion & Campion, 2023).

In Cuba, the regulatory and methodological framework for human capital management includes the Cuban Standard NC 3000:2007 and the labor provisions established in Law No. 116/2013, Labor Code, and Decree No. 326/2014, its implementing regulation. These instruments regulate core aspects of employment relations and provide the institutional context within which recruitment and selection are managed. The model developed by Cuesta (2005) constitutes an important Cuban methodological reference, integrating competency analysis, recruitment, evaluation, decision-making, and subsequent integration. Studies on Cuban human capital management have also examined the implementation of the NC 3000 family of standards and its systemic orientation (Hernández Darías et al., 2011).

In summary, the literature indicates that recruitment and selection should be understood as an integrated process whose effectiveness depends on the coordination of planning, attraction, assessment, decision-making, induction, and follow-up. Proper articulation of these components can improve the correspondence between candidate characteristics and job requirements and contribute to organizational effectiveness.

In the most recent international context, human talent management has undergone profound transformations driven by digitalization, artificial intelligence, and the increasing use of workforce data. Deloitte (2024) and Mercer (2025) highlight the need for organizations to combine adaptability, skills development, and people-centered management. Academic research likewise shows the growing relevance of workforce analytics for organizational decision-making and the institutionalization of data-informed human resource practices (McCartney & Fu, 2024; Cho et al., 2023). These trends confirm that attracting and retaining talent is increasingly linked to organizations' ability to develop flexible, transparent, and evidence-informed human resource systems.

In this context, the adoption of selection procedures based on competencies, scientific evidence, and strategic alignment—such as the model of Cuesta (2005) in Cuba—is particularly relevant because it offers methodological coherence with the demands of integrated human capital management. Consequently, this research adopts Cuesta's procedure as a frame of reference due to its conceptual, methodological, and contextual relevance, while adapting it to the specific conditions identified at the Sancti-Spíritus Electric Company.

Thus, the research gap addressed by this study lies not in the absence of recruitment and selection models, but in the need to translate existing competency-based and regulatory principles into a structured procedure adapted to the specific operational conditions of EESSP and capable of incorporating diagnosis, feedback, and monitoring. This contextual adaptation constitutes the main practical and methodological contribution of the study.

The design of a recruitment and selection procedure at the Sancti-Spíritus Electric Company (EESSP) is also relevant to broader challenges in the energy sector. The International Energy Agency (2024) reports continuing workforce pressures and shortages of skilled personnel in energy activities, which reinforce the strategic importance of effective attraction, selection, and development practices for operational continuity and sustainability.

The objective of this study was to develop a procedure for managing the recruitment and selection process for personnel at the Sancti-Spíritus Electric Company, aimed at contributing to the effectiveness and efficiency of human resource management. To this end, the theoretical and methodological foundations were analyzed, the current process within the company was characterized, the stages and steps of the proposed procedure were documented, and its application at the company's Central Office was assessed.

Methodology

The research was developed under a mixed approach, integrating theoretical and empirical methods to provide a scientific foundation for the proposal and to assess its practical application. Among the theoretical methods employed, the historical-logical method was used to analyze the evolution of recruitment and selection processes in Cuba and internationally. The analytical-synthetic method supported the identification and integration of the main conceptual and methodological foundations of human talent management, while the inductive-deductive method was used to organize the analytical categories arising from the diagnosis and the design of the procedure.

To capture primary data and characterize the current state of the process at EESSP, surveys were administered to workers and managers, incorporating Likert-type scales to examine satisfaction and perceptions related to suitability and integration. These quantitative data were complemented by semi-structured interviews conducted during the diagnostic and evaluation stages. A documentary review was also carried out, including the Cuban Standard NC 3000:2007, Law No. 116/2013 (Labor Code), Decree No. 326/2014, collective agreements, and internal organizational regulations relevant to recruitment and selection.

To support the theoretical and practical validation of the proposed procedure, the Delphi method was applied using the judgment of specialists in human resource management. The Ishikawa diagram was used as a diagnostic tool to identify and organize the root causes of deficiencies detected in the existing recruitment and selection process. The different sources of evidence—survey responses, interviews, documentary information, expert judgment, and organizational indicators—were then considered jointly through methodological triangulation.

The quantitative evidence reported in this article is descriptive and is based on the organizational indicators and survey results available from the implementation process. Accordingly, percentage changes are interpreted as observed variations associated with the application of the procedure and not as inferential estimates of causal effects. The available source documentation did not provide the information required to report inferential tests, confidence intervals, or psychometric coefficients; therefore, no such statistics are claimed in this study.

The methodological orientation is consistent with current developments in people analytics and data-informed human resource management, which emphasize the value of organizational data while also calling for transparency and responsible interpretation (Cho et al., 2023; McCartney & Fu, 2024). In personnel selection specifically, the incorporation of artificial intelligence and machine learning can support screening and decision-making, but requires careful attention to validity, fairness, and ethical risks (Hunkenschroer & Luetge, 2022; Campion & Campion, 2023).

Results and Discussion

The designed procedure comprises four stages and ten steps that logically and sequentially integrate the actions required to optimize the recruitment and selection process at EESSP, beginning with a job needs assessment, followed by the definition of the competency profile, internal and external recruitment, candidate pre-selection, evaluation through tests and interviews, final selection, integration into the position, initial performance evaluation, feedback and adjustment, and concluding with monitoring and control.

The application of the designed procedure at the Sancti-Spíritus Electric Company (EESSP) produced observable changes in indicators related to efficiency, profile-job fit, satisfaction, and staff

turnover. The findings are presented from quantitative, qualitative, and comparative perspectives.

On the quantitative front, the organizational records reported measurable changes after implementation of the procedure. The average recruitment and selection cycle decreased from 40 to 30 days, equivalent to a 25% reduction. The study records also reported a 30% improvement in profile-job fit, a 20% increase in perceived satisfaction with the onboarding process, and a 15% decrease in annual staff turnover, with the greatest reduction in critical technical areas. These figures should be interpreted descriptively, because the source documentation available for this article does not include the underlying individual-level dataset or the statistical information necessary for inferential testing. Internal and external audit observations also indicated an improvement in perceptions of transparency and objectivity in the revised selection workflow.

From a qualitative standpoint, the procedure was associated with organizational changes that extended beyond the reported indicators. The more systematic use of criteria for recruitment and assessment reduced the space for informal considerations in hiring decisions and strengthened perceptions of transparency and fairness. The prioritization of interpersonal skills and ethical values during candidate assessment was also consistent with the objective of improving cultural integration and teamwork. Interview and survey feedback from managers and workers indicated greater confidence in the organization of the selection process.

When the EESSP experience is compared with established approaches to human resource management, several points of convergence can be observed. Cuesta's (2005) model emphasizes the integration of human resource processes and their relationship with organizational strategy, while Spencer and Spencer (1993) provide a competency-based foundation for defining the characteristics associated with effective performance. The procedure designed at EESSP preserves these principles but adapts them to the specific sequence of diagnosis, recruitment, assessment, integration, feedback, and monitoring required by the organization.

Looking at more recent international developments, personnel selection is increasingly influenced by artificial intelligence, machine learning, and people analytics. Research in this area shows that data-driven tools can improve the processing and use of information in selection, while also creating challenges related to validity, bias, transparency, and ethics (Hunkenschroer & Luetge, 2022; Campion & Campion, 2023). The EESSP proposal does not depend on automated selection; however, its use of structured diagnostic and validation tools is compatible with the broader movement toward more systematic and evidence-informed human resource decisions.

At a more specific level, the reduction in recruitment time observed at EESSP is consistent with the general objective of people analytics and structured selection systems to improve the quality and efficiency of human resource decisions (Downes et al., 2023; Cho et al., 2023). The improvement reported in profile-job fit is also conceptually consistent with contemporary fit research, although fit should be evaluated carefully and should not be reduced to subjective similarity between candidates and organizations (Kristof-Brown et al., 2023; Billsberry & Vleugels, 2023). These comparisons support the relevance of the procedure while avoiding direct causal equivalence with findings obtained in other organizational contexts.

The main contribution of the procedure therefore lies in the contextual integration of competency-based selection, organizational diagnosis, expert validation, feedback, and monitoring within a single sequence adapted to EESSP.

tablished selection models, the proposal operationalizes them for a specific Cuban electricity-sector organization and incorporates continuous adjustment mechanisms. This feature responds to current demands for more adaptive and evidence-informed human resource management while maintaining consistency with the institutional context in which the company operates.

The results at the Sancti-Spíritus Electric Company (EESSP) suggest that a structured recruitment and selection process can contribute to organizational efficiency. The reduction in hiring time, the reported improvement in profile-job fit, and the decrease in employee turnover support the practical relevance of the proposed approach. Because the analysis is descriptive, these findings should be interpreted as organizational changes observed during implementation rather than as proof of causality.

Comparing these findings with classical and contemporary approaches shows that the procedure combines competency-based assessment with a sequential and monitored process. This is consistent with the strategic view of personnel selection described by Salgado and Moscoso (2008) and with current calls for structured, evidence-informed selection practices. The incorporation of diagnosis, feedback, and monitoring provides the EESSP proposal with an adaptive component suited to its organizational context.

The discussion is further strengthened by recent research on the responsible use of technology and analytics in human resource management. Hunkenschroer and Luetge (2022) stress the ethical challenges of AI-enabled recruiting and selection, while Campion and Campion (2023) review the opportunities and methodological lessons associated with machine learning in personnel selection. Similarly, workforce analytics research emphasizes that data must be translated into useful decisions through appropriate organizational capabilities and responsible interpretation (Downes et al., 2023; Cho et al., 2023). These developments provide relevant future direction for the digital enhancement of the EESSP procedure.

Overall, the procedure implemented at EESSP showed favorable descriptive changes in efficiency, satisfaction, profile-job fit, and retention indicators. Its consistency with the NC 3000:2007 framework, Cuban labor regulations, and the methodological orientation of Cuesta (2005) support its contextual relevance. At the same time, the absence of individual-level data and inferential statistical analysis limits the extent to which the observed changes can be attributed exclusively to the procedure. Future applications should retain complete datasets, specify sampling and expert-selection criteria, report instrument reliability where applicable, and evaluate the procedure in additional organizational units and electricity-sector companies.

Conclusions

Human talent management is a determining component of organizational performance and sustainability, and recruitment and selection are central processes for aligning people with job requirements. The four-stage, ten-step procedure designed for the Sancti-Spíritus Electric Company was applied at the Central Office and was associated with favorable descriptive changes, including a shorter recruitment cycle, improved profile-job fit, greater satisfaction with onboarding, lower staff turnover, and better perceptions of transparency in the process. The proposal integrates competency-based, strategic, systemic, and practical elements adapted to the Cuban organizational context.

The comparative analysis indicates that the proposal is consistent with established competency-based approaches while responding to specific organizational needs at EESSP. Its main methodological contribution is the articulation of diagnosis, structured recruitment and assessment, integration, feedback, and monitoring

in a single procedure adapted to the company. Its practical value lies in providing a clearer and more systematic basis for personnel decisions. Nevertheless, the descriptive nature of the available evidence and the absence of individual-level data for inferential analysis constitute limitations that should be addressed in future applications. Further studies should evaluate the procedure in other organizational units and companies, document sampling and validation processes in greater detail, and explore the responsible incorporation of digital tools and people analytics.

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Conflicts of interest

The author declares that she has no conflicts of interest.

Author contribution

Conceptualization: de la Paz Hernández, M. de los Á. Data curation: de la Paz Hernández, M. de los Á. Formal analysis: De la Paz Hernández, M. de los Á. Research: De la Paz Hernández, M. de los Á. Methodology: De la Paz Hernández, M. de los Á. Supervision De la Paz Hernández, M. de los Á. Validation: De la Paz Hernández, M. de los Á. Visualization: De la Paz Hernández, M. de los Á. Writing the original draft: De la Paz Hernández, M. de los Á. Writing, review and editing: De la Paz Hernández, M. de los Á.

Data availability statement

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Statement on the use of AI

The authors acknowledge the use of generative AI and AI-assisted technologies to improve the readability and clarity of the article.

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