

FORMATION OF CREATIVITY

AS A QUALITY OF PERSONALITY IN WORKERS OF THE CUBAN BUSINESS SECTOR

FORMACIÓN DE LA CREATIVIDAD COMO CUALIDAD DE LA PERSONALIDAD EN TRABAJADORES EL SECTOR EMPRESARIAL CUBANO

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ABSTRACT

A work that contributes to solve the professional problem of how to promote the development of work creativity in the Cuban business sector is presented. The objective is the elaboration of a procedure that contributes to the development of the work creativity of workers of the Cuban business sector. Theoretical methods are used such as: analysis-synthesis, induction-deduction and historical-logical; and empirical methods such as: document analysis, observation, the survey, the interview, the pre-experiment and the case study. Statistical-mathematical methods are used: the percentage analysis, the statistical-descriptive method, and the Wilcoxon signed rank test. The impact achieved is verified in the workers' transformations in the productive area of the Turquino Business Base Unit, in Holguín province, Cuba, belonging to the Vegetables Preserving Company, in terms of promoting a better performance in their work functions, with emphasis on flexibility, independence, intellectual curiosity and originality during the preparation of products and the provision of services of social necessity and utility in the labor context.

Keywords: State company, Creativity, Training.

RESUMEN

Se presenta un trabajo que contribuye a resolver el problema profesional de cómo favorecer el desarrollo de la creatividad laboral de los trabajadores en el sector empresarial cubano, cuyo objetivo es la elaboración de un procedimiento para tal fin. Se emplean métodos teóricos tales como: análisis-síntesis, inducción-deducción e histórico-lógico y métodos empíricos como: el análisis de documentos, la observación, la encuesta, la entrevista, el preexperimental y el estudio de caso. Como métodos estadístico-matemáticos se utilizan: el análisis porcentual, el método estadístico-descriptivo y la prueba de los rangos con signo de Wilcoxon. El impacto logrado se constata en las transformaciones en los trabajadores del área productiva de la empresa de Conservas de Vegetales, en cuanto a propiciar un mejor desempeño en sus funciones laborales con énfasis en la flexibilidad, independencia, curiosidad intelectual y originalidad

durante la elaboración de productos y la prestación de servicios de necesidad y utilidad social en el contexto laboral.

Palabras clave: Empresa estatal, Creatividad, Formación.

INTRODUCTION

The economic, political, social and technological changes originating in the world are increasingly profound and affect the entire environment. They are significant because of the speed with which they occur and the intensity of their impact. In this scenario, greater flexibility and capacity for adaptation are required on the part of states, companies and their managers and workers.

The job training of workers plays an important role in helping them to be able to act and use their knowledge and skills to face and provide solutions, in a creative way, to the problems that arise in daily life. On this topic, in Holguín province, the work of the Center of Studies for the Labor Training of the University of Holguín stands out, which has systematized its experiences since 1999 and from which job training is directed under the guidance of Doctor Prudencio Alberto Leyva Figueredo. The works of Dorrego et al. (2014), Infante et al. (2020), Leyva & Mendoza (2011) and Martínez et al. (2019) stand out, among others.

These, before mentioned, researchers refer to the process and development of job training, its importance based on the characteristics of the subjects involved, its relationship with the context and the specificities of work activity in order to contribute to transformations in personality and manifest productive behaviors during their performance in the workplace.

These proposals promote the development of job training from different work areas and based on the development of work qualities such as: committed, responsible or laborious. However, it is necessary to delve deeper into this business scenario to achieve the development of human capital based on creative performance that promotes transformations in doing, knowing how to do and knowing how to coexist in the workplace. To achieve this, it is necessary that in this new labor context, business organizations commit to this as an element that differentiates the most advanced economies.

Work creativity contributes to an entity economic growth. It is of utmost importance to enhance trade, position brands, products, goods and services of companies and also

promote entry into new markets. This constitutes a factor of competitiveness, linked to innovation and knowledge. It contributes to continuous improvement within the company and as an idea generation tool, it constitutes a highly effective weapon to improve innovation processes and reinforce the value of the results.

For one hand, authors such as: Córdoba et al. (2018) agree that creativity enhances the success of the organization, contributes to reducing costs and maintaining a high level of satisfaction of the clients; as well as, it favors business competition and the achievement of new customers for the company's products.

On the other hand, Galván (2020) considers that business creativity is the ability of a company to create a novel or original product or process. It constitutes the power that organizations have to devise a new good or service, or to propose improvements to their production process. In this way, it seeks to generate value for the company.

The present investigation takes place in the state companies of the Cuban business system, which have highly qualified technical personnel, with years of experience in the training of specialists who respond to the interests of the productive needs of each of them. However, they do not delve into the formation of qualities such as work creativity, a necessary aspect in the current context with marked and constant changes, which require workers with attitudes to adapt to the current Cuban environment, capacity for teamwork and the search for solutions to unforeseen situations.

The application of methods and techniques to diagnose the state of job training in workers in the Cuban business sector allowed us to verify the following limitations:

- Insufficient flexibility to adapt to the needs and new situations to be resolved that arise in the workplace.
- Little independence in decision-making to carry out actions in problematic situations at the working place.
- Little intellectual curiosity to try to solve problems in the work area and fluency in generating new ideas.
- Insufficient originality during the production of articles and the provision of services of social necessity and utility in the work context. This work presents the results achieved in the study and implementation of the solution to the problem related to the insufficiencies in the development of work creativity in workers of the Cuban

business system, which limit their performance in the workplace. Therefore, the objective of the work is specified in the development of a procedure for the development of work creativity in workers in the Cuban business sector.

MATERIALS AND METHODS

The research was carried out in the period from January 2021 to September 2022. It is carried out in the Turquino Business Base Unit of the Vegetables Preserving Company in the province of Holguín, belonging to the Vegetables Preserving Company, subordinate to the Business Group of the Agri-Food Industry, of the Ministry of the Food Industry of Cuba.

The population selected for the research process corresponds to the workers in the productive area of the before mentioned Business Base Unit, amounting to 100 workers. The sample chosen by simple random sampling corresponded to 30 workers, including 6 managers and 3 advisors.

The methodology used in this research was framed in the development and implementation of a procedure for the development of work creativity in workers in the aforementioned area.

The research methods used correspond to the following:

The analytical-synthetic was applied during the development of the research process in the analysis of the conceptual bases, in the deepening and interpretation of the theoretical-methodological foundations on the topic and in the processing of both empirical and theoretical information.

Induction-deduction to achieve generalizations between the elements investigated, make inferences and subject the analyzed documents to criticism that allowed the systematization of the initial state of the problem, among other aspects.

The survey of workers in the productive area of the Turquino Business Base Unit of the Vegetables Preserving Company to determine the regularities that underlie the problem in practice and assess the transformations in the subjects when applying the proposal.

The interview with managers of the productive area of above-mentioned Business Base Unit, to diagnose the state of job training with emphasis on work creativity in the workers of said area.

Observation of the workplace allowed us to obtain information about the initial and final situation confirmed by the evidence in practice of the professional problem, the progress that occurred in the workers from the application of the procedure and the transformations that occurred in the process in general.

The analysis of documents to understand how the job training process is directed and organized in the productive area of the company, with emphasis on the development of job creativity.

The percentage analysis for the quantitative analysis of the data provided by the instruments that were applied, the descriptive method to illustrate in graphs and tables the results of the tests applied, the pre-experiment and the case study to corroborate the feasibility.

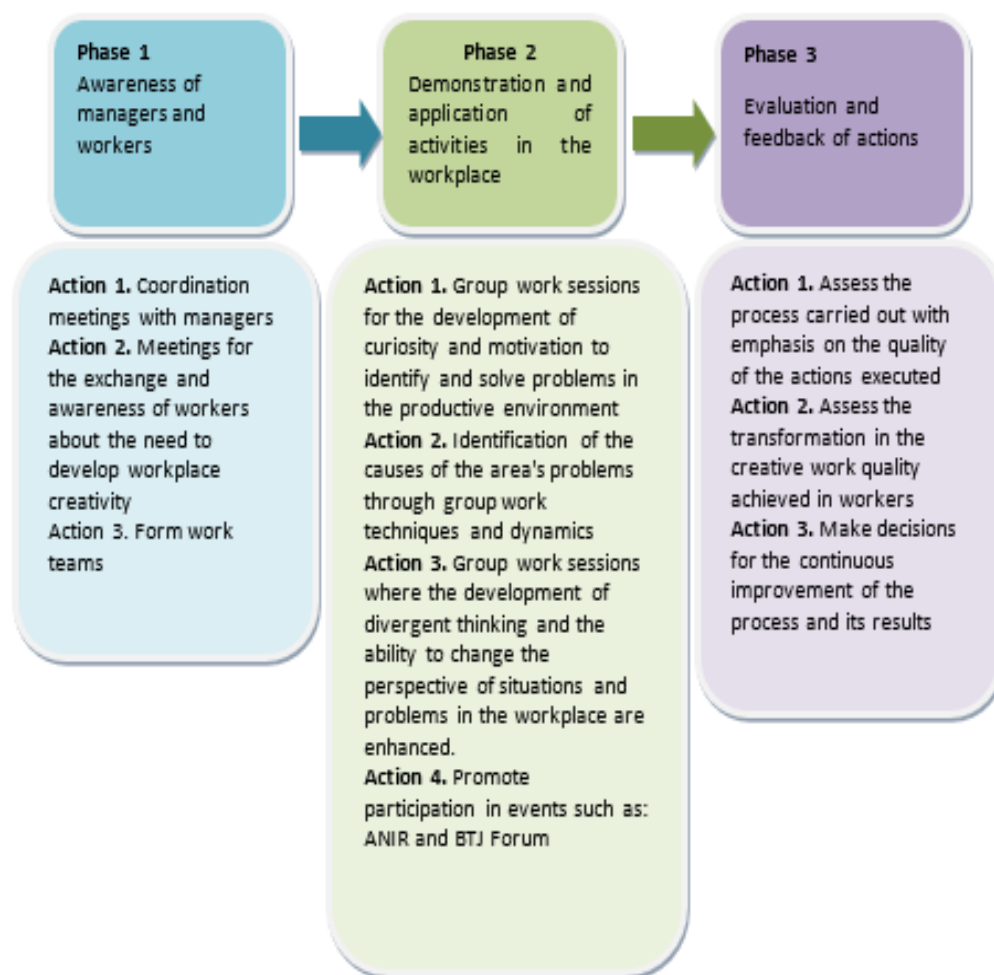
The developed procedure constituted the set of actions of a methodological nature, aimed at the development of work creativity during the production process of the workers of the Turquino Business Base Unit of the Vegetables Preserving Company. It established in an orderly and precise manner, the actions and methodological operations for the planning, organization, execution and evaluation of the development of work creativity in the workers of the business unit.

The procedure was applied in three phases. The phases and actions of the procedure for the development of work creativity shows in figura 1.

In the application of the procedure, during the first phase, actions were taken to raise awareness among managers and workers in the productive area of the Turquino Business Base Unit of the Vegetables Preserving Company about the importance of developing creativity work for the company. This was carried out through coordination meetings with the managers involved where the theoretical aspects about work creativity were presented and comparisons were made with other companies and their positioning in the market, to endorse the need for the transformation of the production

area and its workers. The problematic dialogic method was used, and the asking of questions aimed at diagnosing the hierarchy granted to creativity for the development of the production process.

Fig 1: Phases of the procedure for the development of work creativity.



Note. The figure represents the phases of the implemented procedure, as well as the predefined actions in each of them.

Source: self-made.

To specify the results of its implementation in practice, the pre-experiment method was used in the selected sample. Its application went through the following stages:

- Determination of the hypothesis and variables.
- Application of the procedure.
- Determination of the feasibility of the result.

The non-parametric Wilcoxon signed rank test was used, which is used in small related samples to compare a group before and after and determine if there are differences between them. Statistical processing was carried out in the Windows operating system environment, using SPSS and Excel.

It was determined as a null hypothesis (H0) that there are no significant statistical correlations between the initial state and the final state of the sample in terms of the development of work creativity in the workers of the productive area of the Turquino Business Base Unit of the Vegetables Preserving Company using the procedure ($X_{\text{initial}} = X_{\text{final}}$).

As an alternative hypothesis (H1), it was specified that the use of the procedure causes significant statistical correlations between the initial and final state of the sample ($\text{final } X > \text{initial } X$). 95% confidence is considered, therefore, the degree of reliability in the application of the test is $= 0.05$.

The independent variable was considered the procedure for the development of work creativity in the workers of the productive area of the Turquino Business Base Unit and as the dependent variable, the professional performance of the workers in the production process.

To assess the transformations in the workers, the technique of observation of the development of work creativity in the workers of the productive area of the Unit Turquino Base Business was applied, before and after applying the proposal, considering as indicators the traits of creative quality, valued as high (3), medium (2), low (1). It was developed systematically with three comparative cuts in the period.

To deepen into the obtained results with the application of the statistical test of signs, a case study was carried out, which allows an in-depth investigation of the transformations of workers in the development of work creativity.

Three workers from the productive area of the Turquino Business Base Unit of the Vegetables Preserving Company were selected based on the following criteria:

- They have more than five years of experience working in the industry.
- They carry out their work in the same work shift, which allows obtaining data simultaneously and a study according to a logical sequence and without interruptions.
- The following were taken into account as selection indicators: motivation for work, work discipline and quality of work performed.
- The selected workers provided their authorization to carry out the study.

The observation instruments to assess the work performance achieved by workers were designed considering five traits of work creativity as indicators: flexibility of thought, imagination and originality, independence,

intellectual curiosity and fluency, measured by the categories high, medium and low.

Taking these criteria into account, three workers from the productive area of the Turquino Base Business Unit of the Canned Vegetables Company were selected as data sources. The instruments were applied in the first months of 2022; once the observation data was obtained, a workshop was held where the work performance of the workers in the sample was socialized with emphasis on work creativity. All three study workers participated in this workshop.

Upon completion, the procedure was put into practice. A second observation was carried out under the same conditions of the indicators and categories to determine the transformations that occurred in the subjects.

RESULTS AND DISCUSSION

The study of creativity becomes relevant with the work of Guilford (1950). Since this date, various investigations have appeared aimed at this content, from a diversity of theoretical-methodological approaches. Among the research published in the last five years, the works of: Aranibar et al. (2022), Galván et al. (2020), Katayani et al. (2022), Ordoñez et al. (2023), Spadari & Nakano (2021).

This is the main reason why that a multiplicity of definitions of creativity and methodological approaches in the scientific approach to this category exist; even within the group of researchers who share the same conception. Despite this variety, the theoretical approach allows us to differentiate four large groups:

- Focused on the product: they study creativity from the creative product, that is, what characteristics an object (real or ideal) must have to be considered new, original.
- Person-centered: they concentrate their studies on people considered creative, looking for what characterizes them and what differentiates them from those who are not reputed as such.
- Focused on the process: they investigate how the creation process occurs, they try to elucidate, fundamentally, what stages and phases the creative process follows, what conditions facilitate or hinder this process and the similarities and differences of the creative act.
- Mixed approaches: there are researches that cannot be considered in a defined way in one approach or another, but rather present mixed methodological approaches.

In this research, we start from the person-centered approach by considering creativity as a work quality to be developed in the workers of the productive area of the Turquino Business Base Unit of the Vegetables Preserving Company. However, some elements of the creative process will be taken, assuming that for a person to develop this quality it is required to perfect the intrinsic creative process and the creative environments in the company.

Spadari & Nakano (2021) consider that creativity “can be encouraged and valued in the workplace. This will depend a lot the company culture and the understanding of creativity that bosses have and how much this characteristic is valued (p. 272). In this regard, during the application of the first phase of the proposed procedure, certain managers’ barriers were evident, such as:

- Insufficient knowledge about creativity and the characteristics that a creative person should possess.
- Although they recognize the importance of developing creativity in workers in the production area, they are reluctant to adapt the processes, scenarios and means to promote its development.

In this sense he agrees with Katayani et al. (2022) when he states: “Obviously, enhancing a sound workplace improves and enacts representative results like innovative thoughts inception”, (p. 9770).

Through individual conversations and collective debates, we worked to create a favorable socio-psychological environment among workers to guarantee their personal involvement and awareness about the need to develop workplace creativity. Blockages already perceived by Ordoñez et al. (2023) were revealed, such as: certain resistance due to fear of novelty and lack of willingness to use new approaches in certain situations. These blockages were gradually overcome and the acceptance of all participants and the willingness to cooperate of 100% of the sample were achieved.

Then, five work teams were created, made up of six workers. In each team, the diversity of knowledge, capabilities, functions and visions was confirmed. Respectful relationships, active exchange and adequate communication were prioritized. These aspects are addressed by Anderson et al. (2014) and taken up by Córdoba et al. (2018), who assess that the composition of the work group, contextual influences and group characteristics influence creativity at this level.

During the second phase of the procedure, the first action works to foster curiosity, interest and motivation to identify problems in the productive environment and solve them. To this end, group work sessions are held where each team is guided to focus on a certain production line and, first individually and then collectively, the aspects that could be improved are raised.

In the second action, the causes of the problems identified in the previous step were identified. For this, the brainstorming technique was used. A moderator was selected from each team who wrote down the ideas expressed by each participant on a whiteboard. Afterwards, they were discussed one by one and the idea to be put into practice was selected. Five problems in the company’s production area were identified that require a collective and creative approach to solve.

In action 3, three group work sessions were held where an attempt was made to find solutions to the problem identified by each team, from different perspectives. The SCAMPER technique was used focused on the specific problem of each team.

The methods and techniques used in these actions were used by several authors according to studies by Aranibar et al. (2022) as strategies to maximize creative thinking.

The results obtained in this research made it possible to evaluate in all work groups the different problems that they face every day in the production area, to increase the preparation of workers and decision-makers of the production process for the sake of better decision-making. This contributed to enhancing the development of the characteristic features of creativity such as: intellectual curiosity, imagination, fluidity, flexibility, independence and originality.

On the other hand, it was possible for each work team to prepare a presentation for the grassroots events of the National Association of Rationalizing and Innovators, and the Youth Technical Brigades.

In the third phase of the procedure, the assessment of the process was carried out, the transformations in the workers were identified in terms of the development of work creativity and the actions were readjusted for its continuity. The observation results at the beginning and at the end are shown below in Table 1.

Table 1: Results in the application of the procedure at the beginning and at the end by indicators.

Indicator (traits)	High		Medium		Low	
	Beginning	End	Beginning	End	Beginning	End
Thinking flexibility	0	10	10	20	20	0
Imagination and originality	0	14	16	16	14	0
Independence	0	16	21	14	9	0
Intellectual curiosity	0	3	3	27	27	0
Fluency	0	9	10	21	20	0

Source: self-made.

The results in Table 1 show positive transformations in all the traits that characterize work creativity in workers in the productive area of the Turquino Business Base Unit. This contributed to better performance in their work functions with emphasis on flexibility, independence, intellectual curiosity, fluidity and originality during the production of canned products of social necessity and utility in the work context. Raise the quality of production and improve the work performance of the productive area.

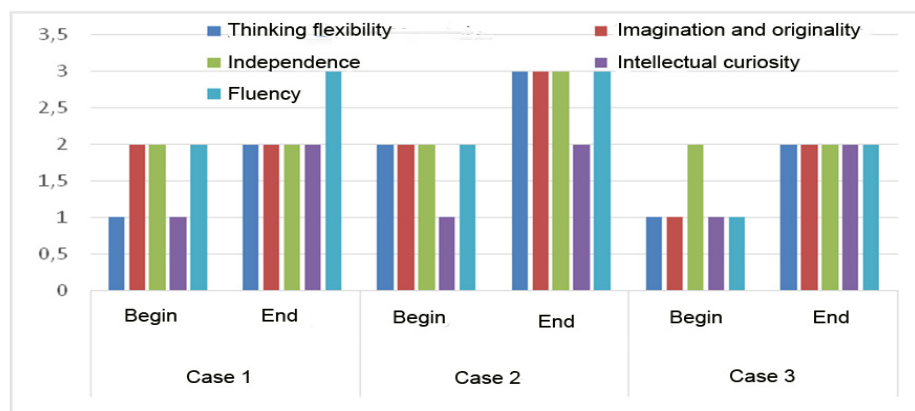
In the assessment carried out as part of the analysis of the Business Base Unit results, the production of sauces, preserved fruits and vegetables, the preparation of compotes for babies and the production of nuts increased, products intended to satisfy the demands of health institutions, education, family food consumption system in the province of Holguín. In addition, greater responsibility was evident in saving electrical energy and caring for the environment during food preparation.

Case study results

Case 1 Worker in the productive area with more than twenty years of work experience in the industry, female, resides in the municipality of Holguín. He began his work in the industry, holding several low-level positions until reaching managerial positions within the productive area.

Case 2 Worker in the productive area with more than ten years of work experience in the industry, male, resides in the municipality of Holguín. He began his work in the industry as a warehouseman, going through various occupations until he became Master B of Food Industry Product Manufacturing within the productive area.

Case 3 Productive area worker with five years of work experience in the industry, male, resides in the municipality of Holguín. He began his work in the industry as Auxiliary Operator "B" for the Production of Food Industry Products, a job that he continues to perform within the productive area. Figure 2 shows the results obtained with the case study.

Fig 2: Creativity traits transformation in the selected cases.

Source: self-made.

Looking at the graph in Figure 2, it can be considered that in all the studied cases, positive transformations are noted in at least three of the observed indicators of creativity, which led to their superior performance within the aforementioned area.

The following results were achieved by the application of the procedure:

- It produced individual and social transformations by helping to identify and design solutions to problems they manifest in the workplace.
- It took into account group bonding and environmental influences based on the potential of the personological resources of each participant.
- It enhanced the fluidity and flexibility of thinking during the generation and socialization of ideas in solving problems in the production area.
- It contributed to the development of personal and collective commitment to the company in the search for innovative solutions to production problems.
- It contributed to creating adequate and favorable conditions for the development of work creativity in Business Base Unit workers.

On the other hand, the proposed procedure is easy to execute since it does not require specialists in the field for its application; it can only be implemented by following the instructions and complying with the actions to be developed in each phase.

The actions planned for execution in the different stages can be applicable to the different sectors of the Cuban company; it is not framed with specific actions of a sector. Furthermore, it is applicable to environments where a high cultural level is not required, because basic actions were planned for the development of creativity.

CONCLUSIONS

The methods and techniques for diagnosing the initial state of job training in workers in the Cuban business sector revealed insufficiencies in the fundamental features of job creativity. To solve this problem, a procedure was proposed for the development of work creativity which allowed directing actions that favor flexibility, fluidity, independence, intellectual curiosity, imagination and originality of the workers of the Turquino Business Base Unit of the Vegetables Preserving Company during the production of articles and the provision of services of social necessity and utility in the work context.

As impacts, it can be seen in the educational order that work qualities were transformed with emphasis on creative work quality, which allowed raising the quality of production and improving work performance in the productive area.

From a social perspective, canned fruits, sauces, canned tomatoes, vegetables, compotes and nuts are produced to meet the demands of health institutions, education, and the family food system for consumption in the province.

From an economic point of view, the increase in the rational use of existing financial, human and technological resources and greater willingness and commitment in the production of high-quality canned fruits, sauces, canned tomatoes, vegetables, compotes and nuts. Furthermore, from an environmental and energy perspective, it contributed to achieving savings in electrical energy and an increase in sustainability during food preparation.

The implementation in practice, through a pre-experiment and a case study, corroborates positive transformations in the characteristic features of work creativity during the production of articles and the provision of services of social necessity and utility in the work context of the Turquino Business Base Unit of the Vegetables Preserving Company, which justifies its effectiveness and relevance.

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