

## THE ORGANIZATIONAL DESIGN IN UNIVERSITIES OF CUBA

## EL DISEÑO ORGANIZACIONAL EN UNIVERSIDADES DE CUBA

Miriam Alpízar Santana \*  <https://orcid.org/0000-0003-4140-8785>

Hilmabel Pérez Cruz  <https://orcid.org/0000-0003-2556-1712>

Ministry of Higher Education, Havana, Cuba

\*Corresponding Author: [malpizar@mes.gob.cu](mailto:malpizar@mes.gob.cu)

Classification JEL: I21, I23, I28

DOI: <https://doi.org/10.5281/zenodo.6907403>

*Received: 05/10/2022*

*Accepted: 06/08/2022*

### Abstract

In the university as an institution, organizational models have been implemented as diverse as the universities have been diverse and varied. From its origins, an administration capable of achieving its mission and objectives was required, with particularities of the corresponding university context and according to the models documented in the literature. The article aims to identify the transformations of the structures in the universities attached to the Ministry of Higher Education, the causes that motivated it and the expected impacts. The research carried out is qualitative, uses inductive, historical and analytical methods, with data collected from reports and structured and predetermined experiences, which contain descriptions and observations. Participatory observation techniques, case studies, records of life experiences, and the expertise and contributions of the authors are used. It is concluded that the adaptations made to the organizational designs in the universities have a favorable impact on the fulfillment of their strategies and objectives.

**Keywords:** university, organizational design, organizational structures, strategies, objectives

### Resumen

En la universidad como institución, se han implementado modelos organizacionales tan diversos, como diversas y variadas han sido las universidades. Desde sus orígenes se requirió de una administración

capaz de lograr el cumplimiento de su misión y sus objetivos, con particularidades propias del contexto universitario correspondiente y según los modelos documentados en la literatura. Es característico diferenciar los arreglos estructurales en los procesos académicos y administrativos. El artículo tiene como objetivo identificar las transformaciones de las estructuras organizativas en las universidades adscriptas al Ministerio de Educación Superior, las causas que lo motivaron y los impactos esperados. La investigación realizada es cualitativa, usa los métodos inductivos, histórico y de análisis, con datos recolectados de informes y experiencias estructuradas y predeterminadas, que contienen descripciones y observaciones. Se emplean técnicas de observación participativa, estudios de caso, registros de experiencias vitales, y la experticia y aportes de las autoras. Se concluye que las adecuaciones realizadas a los diseños organizacionales en las universidades, impactan favorablemente en el cumplimiento de sus estrategias y objetivos.

**Palabras clave:** universidad, diseño organizacional, estructuras organizativas, estrategias, objetivos

### Introduction

In historical, economic, cultural, social and political conditions of a globalized environment, international crisis, blockade and resource limitations, impacted by frequent natural phenomena, the economic and social policy guidelines were approved in the 7th. Congress of the Communist Party of Cuba (PCC), ratified in Parliament and updated in April 2021.<sup>1</sup>

In 2020, the National Plan for Economic and Social Development of Cuba was approved, until 2030, in view of the Sustainable Development Goals (SDG) and the economic, social and environmental goals of the 2030 Agenda for Sustainable Development, approved by the 169-member states of the United Nations (UN) in 2015. The National Plan for Economic and Social Development (PND) of Cuba contains the Bases and the Vision of the Nation, axes and strategic sectors. It is the main economic tool on socialist planning as the guiding category of the economy management system in the different horizons of planning.

The strategic axes constitute pillars and driving forces that allow structuring, specifying and implementing the development strategy and achieving the nation's vision: Human Development, Equity and Social Justice, Infrastructure, Productive Transformation and International Insertion, Natural Resources and Environment and Socialist Government, effective, efficient and social integration.<sup>2</sup> The strategic axis: Human potential, science, technology and innovation contains among its specific objectives: to guarantee the development of universities, their human resources and infrastructure to promote the training of highly qualified human potential and the generation of new knowledge, as well as designing study programs and promoting the granting of advanced studies training scholarships for young talents in universities and institutes that respond to requirements for the introduction of advanced technologies, according to the demands of economic and social development.

In Cuba, a work system is developed, directed by the highest government leadership, based on the application of science and innovation,<sup>3,4</sup> the creation of commissions of experts, advisers, and professionals who participate in programs and projects, supported by scientific institutions, companies, universities and research centers work on projects in the different spheres of the economy and society. New public policies, laws and regulations have an impact on universities, and they adapt training,

science, technology and innovation programs and interaction with society to fulfill the social task that corresponds to them in updating the Cuban economic and social model.

University processes, namely: teaching, research and university social interaction projects, are developed supported by structures with similar typicity based on their historical and traditional character, as well as their systematization. The service activity, for its part, requires suitably arranged and professionalized structures, which have not had similar characteristics in the different universities according to certain objective particularities of their type and of the country. In this context, universities adapt their strategies and organizational designs.

The article aims to identify the transformations of the organizational structures in the universities attached to the Ministry of Higher Education, in recent years, the causes that motivated it and the expected impacts. The use of qualitative research methods and techniques, the documented references, reports and revised reports, plus the expertise due to the direct participation of the authors in the elaboration and implementation of policies, programs and projects, are practical evidence of the results that are described, highlighting that the adaptations made to the organizational designs have a favorable impact on the fulfillment of the strategies and objectives of the institutions.

### **Materials and methods**

In the research, a qualitative approach is used using inductive, historical and analytical methods, making use of data collected from reports and structured and predetermined experiences, which contain descriptions and observations to summarize the description and thereby systematize the processes of improvement of structures. and university templates.

Participatory observation techniques, case studies, records of vital experiences are used, and the expertise and contributions of the authors update the latest processes carried out that obey the current approved policies and corresponding regulations.

The research is structured in three parts, which are presented below:

- Theoretical reference framework on organizational structure and organizational design.
- Improvement of structures and templates of Higher Education.
- Analysis of the main causes of transformations and organizational arrangements in some of the Cuban universities.

### **Results and Discussion**

#### Universities and their organizational structure

The leading role of the university in development and progress highlights social responsibility and links to the demands and problems of society and the productive sector, which in turn marks the necessary relevance of its programs and projects. The innovative quality of the university during the years of its development and its actions is made evident by its contribution to human progress and well-being, to social and productive development, to new technologies and inventions in all branches of knowledge, in generation of new knowledge and training of young professionals.

Universities, like other organizations, build their structural arrangements according to their characteristics, which are quite typical and almost always have a rectorate, faculties, departments or chairs, study and research centers, institutes, libraries, scientific and technical information centers, laboratories and other organizational units that are responsible for functions of university life and provide services to students and teachers.

The universities are accompanied by organizational units to manage and support the development of the main activities, say economic activities, services, maintenance, among others. Introducing more integrated organizational forms in management, which emphasize the external and internal interrelationships of subsystems, functions and processes, contributes to integrating efforts around key processes and achieving better results. Hence, process maps are used in the organizational designs of universities. Such is the case of the University of Holguín, which identified as key processes research, undergraduate and postgraduate training, university extension, and internationalization and institutional communication as transversal to them.<sup>5</sup>

The academic structure is the oldest that has emerged since the very existence of the university, while the administrative or management structure is much more recent, as it arises from the complexity of institutional activity in the last two centuries due to the increase in volume of activity, due to the growth in enrollments and the new missions of the university. The university is an open system integrated into the environment, made up of a network of organizational units, which are managed subject to budgets.

Universities adapt their organizational systems to their mission and expansion of functions according to the needs of the environment and advances in science. They reform and incorporate new forms of teaching, evaluation methods, advanced and pertinent educational technologies, supported by the use of new information and communication technologies, promote transdisciplinary, in the face of new problems in society and the productive sector. They contribute to economic growth and society, for which they generate business incubators, science and technology parks, foundations, interface companies and others, which generate new organizational forms to encourage and multiply development. In this context, quality management in higher education is also a way to systematically improve its processes and fulfill its missions.<sup>6,7</sup>

In Cuba, the university is at the center of the production, dissemination and application of knowledge, scientific research and innovation as a strength in the formation of well-prepared people with up-to-date knowledge, cognitive and intellectual skills and relevant values, which economic development demands. and society of the country.

The interaction between the actors of the government, companies and institutions, articulating efforts and coordinating actions, calls for institutional transformations and changes in the university structural systems. These transformations must respond to the changes contained in new policies and new regulations of the economy that are more flexible, and incorporate new economic and legal figures, displacing the centralized model and encouraging local dynamics to meet the demands posed by economic development and social, closely linked to the government management system based on science and innovation, in support of the National Development Plan and the Sustainable Development Goals of the 2030 agenda.<sup>3,4</sup>

## Organizational Structure Concepts

In any institution, the organization is an administrative function whose main objective is to fix the structure of the relationships of the human group that integrates it. It is common to use the term organization referring to a formalized and intentional structure of roles or positions, it basically consists of designing, maintaining and rectifying the organizational structure, which means<sup>8</sup>:

- 1) The identification and classification of the required activities.
- 2) The grouping of activities by which the objectives are achieved.
- 3) The assignment of each grouping to a manager with authority to supervise it.
- 4) The obligation to carry out horizontal and vertical coordination in the organizational structure.

It should be designed to specify jobs, duties, and accountability for results, to remove performance barriers caused by assignment confusion and uncertainty, and to provide decision-making and communications networks that support company goals. Through organization, the work of an institution or company is fragmented to form individual jobs and later group them by the affinity of their tasks.

The organization as a rational system is conceived as a group of people oriented towards the achievement of specific objectives and that has a social structure with a relatively high degree of formalization. It is “a group of people who interrelate with each other with a certain acceptably explicit purpose and using a variety of resources”,<sup>9</sup> it is “the combination of available human and material means, depending on the achievement of an end, according to a precise scheme of dependencies and interrelationships between the different elements that constitute it”.<sup>10</sup>

It is a rational coordination of activities by a group of people to achieve a common and explicit purpose or objective, through the division of functions and work, and through a hierarchy of authority and responsibility. An organization is itself a social entity for a group of people to carry out some specific purpose.

In structural arrangements, deconcentration, decentralization, interdisciplinarity and differentiation are vital in the development and transformation of organizations. It is also integration in the interrelated functioning of organizations, granting and ratifying its character as a system. In order to comply with organizational strategies, it is necessary to keep the participating subsystems integrated.

The organizational structure is an organizational instrument through which the organization is directed to the achievement of its objectives and is in turn one of the component elements of the implementation of the strategy, providing the organization with a structure that allows coordinating and integrating the various tasks. that the members of the same execute in order to make possible the achievement of their objectives. It is also common to use the term organization to designate institutions, companies and entities.<sup>11</sup>

Some of the most frequently used conceptual definitions of organizational structure:

- “...the set of all the ways in which work is divided into different tasks, then achieving their coordination”<sup>12</sup>;

- “suitable assignment of tasks to groups, determination of levels of authority and hierarchical delegations at different levels of decision and effective communication”<sup>13</sup>;
- “identification and classification of the required activities, grouping of activities to achieve the objectives, assignment of the activity aggregations to a manager with authority to supervise him and the required horizontal and vertical coordination”<sup>14</sup> and
- “network of existing relationships between the components of a company”<sup>15</sup>

Structure is the way work is divided among different tasks and then coordination between them is achieved. It includes the design of tasks and the assignment of responsibilities for their performance, the establishment of lines of authority, as well as the communication channels through which information flows. It is also the set of functions and relationships that formally determine the mission that each unit and/or members of the organization must fulfill, in order to achieve their objectives and the modes of collaboration between them.

The structure includes the formal relationships and the number of levels of the hierarchy and the people that comprise it, their grouping and the design of the communication and coordination system. The general and specific functions and the tasks that must be fulfilled by the management structure are delimited, the determination of the number of management subdivisions, their functions, tasks, interrelationships and levels of subordination, the content of work and the number of workers necessary in each link.

The structure is the set of functions and relationships that formally determine the missions that each unit of the organization must fulfill and the modes of collaboration between these units, which determines the planning and control system insofar as it sets the activities and areas of authority and responsibility of the members of the organization, as well as the channels of communication between members. They are the ways in which the organization divides its work into tasks, and coordinates them with each other.

### Organizational design

Organizational design is the framework in which the processes and activity of the organization take place, how authority and responsibility flow, and how information will circulate. It constitutes the graphic representation of the ordering of the grouping of functions, which correspond according to the processes that must be executed in fulfillment of the mission. Based on the organization's mission and strategies, the processes are identified and the functions that each subdivision ensures related to them are designated. It includes the hierarchy of the processes and the subdivisions that execute them.

Organizational design is concerned with determining the organization structure that is most suitable for the organization's strategy, personnel, technology, and tasks; the organizational structure is the way to divide, organize and coordinate the activities of the organization.<sup>16</sup> Thus, the design and improvement of the organizational structure constitutes one of the fundamental elements in the efficiency of management work, an inadequate structure makes the activities more complex. direction tasks. The existence of excessive organizational units or personnel, or without communication, hampers the activity and operability of the management team, contributes to diluting responsibility, generates bureaucratic procedures and makes its general operation more expensive.

The elements are characteristic of an organization: common goal, men and technical and financial means, combined effort and a system of dependencies and relationships. In an organization people are integrated, a systematic structure that defines and limits the behavior of its members, with a purpose or mission and is influenced and influences the economic, social, cultural, political, legal and technological environment in which it operates. The content and design of the jobs is one of the pieces that make up the organizational design, the jobs are the clearest representations of the structure of the organization.

In job design, the personal requirements of qualified workers are defined, the content of the jobs contributes to training and development, and the way the jobs are designed facilitates the selection of workers and the remuneration system to be used in the job. Job design is that part of the organization's structure that refers to the way tasks and responsibilities are defined in any individual position. It can be defined in more formal terms as the assignment of work activities, duties and responsibilities to organizational members in order to achieve objectives.

Job descriptions are detailed statements of activities; the duties and responsibilities of each one, in no case are all the details of a given position presented, but it is a fundamental source of information. The redesign of the work and the innovation of the processes for its adaptation to self-directed, self-planned or self-controlled systems by all the members of the organization, requires time, a schedule of changes and trained and influential personnel for them. One of the problems in the design of structures in organizations is to obtain and process information for effective decision making.

The redesign of work is required from the lowest level of the structure located in the job to the highest levels in the collective management bodies to organize activities with an expansion and enrichment of the task. The trend is to go to more "flattened" structures with fewer levels and with greater horizontal interaction, in which everything is harmoniously linked within a structure model different from the traditional one, broader and more open communications, functional integration between different areas, network structures, integrated culture, responsibility and flexibility towards projects and objectives.

The process approach in organizational management is very useful given its comprehensiveness in the treatment of resources, based on the expected results. Likewise, it is the systems approach, since it includes among its components: the external environment (culture, politics and society), and the internal environment (organizational culture, leadership, technology, human resources, systems planning and control, information and structures). The evaluation of the performance of human resources according to the fulfillment of their missions,<sup>17</sup> roles<sup>18</sup> and competencies<sup>19</sup> is also a management trend today, which must be considered in the projection and improvement of an organizational structure.

Like any system, management has goals, components, relationships, and properties, as well as a network of authority, executive, and functional hierarchies. Management systems have levels: strategic, tactical and operational that require interconnections and feedback to exercise control over themselves and improve. A management system is an artificial, self-regulated system, where the subject and the management object participate.

The systems approach, as a set of methods and means that are used to investigate and build complex and super complex objects, as methods of formulating, adopting and justifying decisions, has as its theoretical and methodological basis the systemic approach and the general theory of systems and is mainly applied to the investigation of artificial systems created with the participation of man. A system is a series of

components where their behavior together depends on both its elements and the way in which they interact with each other, to reach a common goal following a pre-established plan through the manipulation of data, energy or matter, in a time reference, to provide information, energy or matter; having limits that are identified in their development environment.

The processes constitute the sequence of mutually related or interacting activities, which transform input elements into results, the process approach allows a better and continuous control over the processes and the interrelationships between them.

Integration allows obtaining and articulating the material and human elements of the organization from planning, which is indicated as necessary for the proper functioning of a social organization. In the integration of processes, the logistics approach is highly important. The modern concept of logistics describes it as "the action of the labor collective aimed at guaranteeing the activities of design and direction of the material, informational and financial flows, from their sources of origin to their final destinations, which must be executed in a rational and coordinated manner, with the aim of providing the customer with the products and services, in the quantity, quality, deadlines, in the place and with the costs and information demanded, with high competitiveness and guaranteeing the preservation of the environment."<sup>20</sup>

Designing an organizational structure suggests a set of nine design parameters (the building blocks of organizational structure) that fall into four broad structured groupings in the table below. (See **Table 1**)

**Table 1.** Design parameters of an organizational structure

Design and Parameters	Design and Parameters
I. Job design: 1. Task specialization 2. Formalization of behaviors 3. Preparation (training) and indoctrination of staff (culture)	III. Link Design 6. Planning and control systems 7. Link devices (forms of coordination)
II. Superstructure design 4. Grouping of organizational units 5. Organizational unit size	IV. Decision-making system design 8. Vertical decentralization 9. Horizontal decentralization

Source:<sup>21</sup>

### Improvement of structures and templates of Higher Education

The creation of the Ministry of Higher Education (MES) in 1976 and its network of institutions promoted the expansion and creation of university capacities, especially in the 1980s, with a new structure of careers to satisfy the increase in the levels of tuition, in response to the demands of the economy and society.

The first organizational designs of Cuban universities took as a reference the university models of the region, antecedents of those created with the Spanish and North American influence. The characteristics of the German university model and those of other Eastern European universities prevailed, adapting to their own development and growth.



The transformations in all spheres of life in the country have increased the demand for qualified professionals, in accordance with economic and social development; the university government regime was modified, incorporating students into decisions, institutions were extended to the entire national territory in view of the strategic importance of higher education for social development, Faculties, teaching and non-teaching Departments were created. Centers and capacities for scientific research were created, which began to achieve results, with a high impact for the country, linked to strategic sectors, study centers and science, technology and innovation entities, some with economic independence and others with different levels of subordination that over time have been consolidated with remarkable strength and recognition.<sup>22</sup>

Systematic transformations have been made in the structure of universities. The Municipal University Centers (CUM in Spanish) are constituted, creating capacities in all the municipalities of the country's provinces, as a way to expand the educational offers to contribute to local development in close ties with government actors, institutions and the business sector.

The creation of a wide network of chairs, cultural and sports institutions, museums, libraries and an outstanding artistic and sports movement together with international collaboration, scientific events and the offer of scientific and academic services characterize the country's universities throughout this period impacting on the transformation of its structures. Likewise, the strengthening of postgraduate systems, particularly doctoral training and quality assessment, generated new organizational forms linked to the corresponding transformation and development of the infrastructure that required specialized units for these purposes.

The process of integration of universities in the provinces of the country as part of the Policy for the Improvement of Human Resources and Infrastructure in the last decade and the Policy of Computerization of society together with the advancement of Information and Communication Technologies generated new structural arrangements. Three decades ago, a business system was created that has adapted to the conditions of the environment and the requirements of each stage in what, the most current, are the new figures of interface, foundation, micro, small and medium enterprises (MSMEs), among others created in several universities with new and various forms of interrelation with universities and among them.

In 1988, the I Improvement of Structures and Templates was carried out. In the general guidelines, four indicators were also included to develop this process, these were: worker index, teacher index, leader index and administrative index.

The II Improvement was carried out in the year 1989 to 1993 from the experience developed in four institutions (ISTC, UCLV, UC and UMCC) and in particular as the basis of the process the results obtained by the UCLV were taken, taking into account its complexity, number of careers, the highest percentage of enrollment in the day course, a high level of postgraduate courses, important results in research and a large number of services assumed by the center (cafeterias, dining rooms, dry cleaners, etc.)

The general principles and indicators of the I Improvement were maintained. In addition to incorporating others in the II Improvement, namely, referring to:

- Active participation of students and workers in the analysis of rationality and efficiency.
- Development of the political and ideological process in order to achieve maximum understanding of the need to address the study of effectiveness in the use of human resources.
- Student participation in service, maintenance, self-consumption and other activities.
- Multipurpose application.
- Implementation of self-government in the Student Residence.
- Conception of flatter structures, with fewer leaders, auxiliary apparatus, advisers and methodologists.
- Structures with a minimum of Vice Chancellors, Faculties and Teaching Departments.
- Organization of Large Teaching Departments, which respond to the tasks faced, responsible with careers. With professors with a superior teaching category in management tasks.
- Application of computing in management, raising the quality of work and saving labor force.
- Adequate attention to workers and students.

In 1994 the proposal for a new improvement process arises, proceeding in 1996 to the planning of the III Improvement of Structures and Templates, with the four indicators, although with some differences, and a series of principles in search of:

- Excellence, efficiency and fulfillment of the university's mission with the least amount of material, human and financial resources.
- Test and implement more rational structures and templates, adjusted to the real needs demanded by the strategies and objectives set for the coming years, considering labor discipline and use as a fundamental link to raise the quality of Human Resources management.
- The bases of the III Improvement were to maintain the achievements of the II Improvement with respect to:
  - The collaboration of the students in life support activities in the center.
  - The application of the broad profile, expansion and functional enrichment of positions or occupations and search for new organizational forms.
  - The conception of flatter structures or other variants of matrix or more flexible structures.
  - The Organization of Large Teaching Departments, with the possibility of responding to the tasks they face, responsible for tasks and the use of teachers with a higher teaching category in teaching and scientific management tasks and in accordance with the structure of approved teaching categories.
- Establishment of the indicators that characterize its activities. The result of your application should reflect the improvement achieved in each one.

The principles established for the III improvement were:

- Carry out the process as part of the implementation of a Human Resources Management System in Higher Education.
- Conceive and propose new ways of organizing work, economic and financial in all those activities that allow it.
- Develop an ideological political process in order to achieve maximum understanding of the need to undertake specific actions aimed at greater efficiency and effectiveness in the use of Human Resources.
- Insert improvement in the general policy of the country and not leave anyone helpless.

- Achieve the widest active participation of the workers in the analysis of rationality and efficiency in each instance and dependency.
- Place man at the center of the entity's management and organization work.
- Starting from the MISSION, the objectives and strategies of the center, determine the functions, attributions and a more rational structure and staff.
- The templates resulting from the application of this process must be less than the total number of physical workers plus the contracts against vacancies (occupational level).
- Maintain student-teacher relationships as a minimum indicator of 12.28.
- Calculate according to the postgraduate modalities of equivalent students, so that postgraduates are included in the necessary professors.
- Project the location in the short and medium term of recent graduates in training and scientific reserve, in the necessary templates that result.
- Develop with creativity and initiative everything that corresponds in the specifics of its content, incorporating with the greatest flexibility, without schemes, what its own experience and projection recommend.<sup>22</sup>

In 1996, the process of the III Improvement was opened to the necessary adaptations and transformations of structures and templates of the universities. The subsequent transformations of the structures and templates of the institutions were systematized and institutionalized in a general way in the years 2006, 2009 and 2017, the latter within the framework of the process of structural improvement and composition of the higher education system that was accompanied by a new wage regulation, with a new organic regulation and internal operating manual. Subsequently, the structures were changing based on the necessary adjustments to meet the new tasks and standards by the universities.

As can be seen, each process had its own methodologies, indications and indicators in relation to positions, subordinations and secondments. The possibility of adjusting the organizational structures duly founded by the university management was left open in each of the processes accompanying the development of each university.

Consequently, the universities have carried out structural redesigns motivated by causes of their own development and finally the updated regulations were generated in Decree-Law No. 369 "Modification of Law No. 1307 of July 29, 1976, which includes the Typology and designation and subordination and affiliation of science, technology and innovation entities and universities with the denomination of the typical organizational units of the academy for this type of institution.

### Causes of transformations and organizational arrangements in Cuban universities

The main causes of the systematic improvements in the organizational designs of the universities and the results in structural arrangements generated for more than 30 years are a consequence of the development itself and particularly of the work strategies defined in each stage and the growth, deconcentration and decentralization of functions specific to the impact of scientific and technological development, as well as the public policies approved at each stage.

A study of the documents that contain the processes of Improvement of structures and templates carried out between 1990 and 2007, documented in research works and the latest evaluation processes of organizational structures proposed by universities and the application of the methods and techniques

referred to, allowed to identify and classify causes of the transformations of the organizational arrangements and relate them to the main proposed transformations. Likewise, the Improvement Processes of the Economic activity carried out between 1998 and 2017 were considered, systematized and documented in publications, master's and doctoral theses, papers presented at events that supported obtaining the Prize of the Academy of Sciences of Cuba. in the year 2018.<sup>23</sup>

The strategic planning processes initiated since the early 1990s have had a special impact on the improvement of organizational designs. In each of these processes, the Mission, Vision and Shared Values have been updated. The definition of Objectives and Measurement Criteria by the Strategic Action Units or Key Result Areas, as the case may be, have been associated with the organization's substantive and support functions.

During the 2017-2021 period, the mission of the Ministry of Higher Education was specified, in the elaboration and control of policies, whose execution includes universities and Entities of Science and Technological Innovation. The Mission of the Organization was updated, including promoting the development of science, technology and innovation.

In the planning of this period, the evolution and results of the 2013-2016 strategy and the evaluation and accreditation processes of the stage and the economic and social development policies approved in the country were considered, as in previous processes. The main guidelines for change in this strategic period had as reference events in the national and international context, the transformations in Higher Education and the process of structural improvement and composition of the higher education system in 2019.

In the year 2020, the work objectives that are part of the Strategic Planning were updated and the documents of the 7th. Party Congress supported by the National Assembly of People's Power, the Bases of the National Plan for Economic and Social Development until 2030: Vision of the Nation, Axes and Strategic Sectors, the update of the Guidelines of the Economic and Social Policy of the Party and the Revolution, the 2030 Agenda and the Sustainable Development Goals and define indicators and goals.

Indications of government visits, of the University-Company link and local development were considered. In particular, the main problems that affect the fulfillment of the Organization's mission, the approved Higher Education Policies, those of other organizations, in which it corresponds to participate and the quality standards of the Higher Education Evaluation and Accreditation System were evaluated.

The process approach is the basis of the structure of the strategic project, which implies that the Strategies pay tribute to the fulfillment of the defined indicators to evaluate the performance of the processes, improving the planning to achieve the goals. The actions that make up the strategies and the fulfillment of the goals of the process indicators contribute to achieving the strategic objectives set for the stage. They are executed by functional divisions and by informal matrix structures that address processes in a multidisciplinary way.

Together with the definition of the strategic objectives prioritized by the organization, new indicators and goals were defined, the essential indicators (critical, limits or directives) as those with the greatest influence on priorities, process performance, fulfillment of objectives strategic objectives and the results of the organization, as well as those that are below the necessary levels of efficiency. In the last year of the organization's 2017-2021 Strategic Planning, the impacts and consequences of COVID19 and the

## THE ORGANIZATIONAL DESIGN IN UNIVERSITIES OF CUBA

strategic planning process carried out to prepare the Strategic Project for the 2022-2026 period were considered in particular. As an important consequence, digitalization and virtual together with modifications in programs, teaching methods and evaluation systems.

A summary of the main causes of the transformations and the new organizational arrangements made since the creation of the Agency is described in the following table. (See **Table 2**)

**Table 2.** Main causes of the systematic improvements in the organizational designs of the universities and the structural arrangements generated

	<b>Causes of the transformations</b>	<b>Organizational arrangements generated</b>
1	The opening of new programs and careers	Creation of Faculties and Teaching Departments Change of name and functions of faculties Change of name and functions of Departments Creation of language centers Creation of university colleges
2	Strengthening of quality assessment and accreditation systems	Creation of evaluation departments.
3	The consolidation of the postgraduate system and scientific degrees	Creation of the National Commission of Scientific Degree Creation of departments and Working Groups of Scientific Degree
4	The process of integration of higher education in Cuba and transfer of universities	Integration of universities Integration of faculties Department Integration Extinction of entities Extinction of faculties and departments
5	Marketing policy for academic services	Creation of departments and service export workgroups
6	Strengthening international relations	Creation of directorates or departments of International Relations
7	Science, technology and innovation policies	Creation of Science, Technology and Innovation directorates, departments and working groups Creation of Study Centers, Science, Technology and Innovation Entities, Innovation Development Unit
8	The creation and liquidation of companies	Creation and extinction of the Mercadu Company Creation of companies
9	The universalization of higher education	Creation of Branches and Municipal University Centers New teaching and non-teaching departments.
10	The implementation of economic and social policy guidelines	Creation of General Directorates and Directorates Creation of Departments or work groups Feature Changes Subordination changes
11	The consolidation of research groups	Creation of Science, Technology and Innovation Entities
12	Strengthening educational work in student residences	Creation of Student Residence Departments and/or Addresses Creation of groups for educational work

**Source:** self-made

## THE ORGANIZATIONAL DESIGN IN UNIVERSITIES OF CUBA

In the last three years, the transformations in the structures of some universities had as main causes those that are summarized in the following table (See **Table 3**).

**Table 3.** Causes of the transformations and organizational arrangements of some universities in the last three years

	<b>Causes of the transformations</b>	<b>Organizational arrangements generated</b>
1	Article 41.1 of Decree Law 3. Of the Documentary Management and Archive System of the Republic of Cuba	Creation of Departments and Groups of Statistics or Information Management (UM, UIJ, UCLV, UG) Change of subordination of the activity that manages the information (FCU) Creation of work groups or departments of document management and the Archive. (UPR, UH, UM, UIJ, UCLV, UCF, UNISS, UDG, ULT, UG)
2	Regulations of contracting activity based on the new and varied economic figures in the country	Creation of Departments or work groups for attention to contracting, fixed assets, accounting. (UM, UIJ)
4	Technical assurance of investments and maintenance of infrastructure and equipment	Creation of organizational areas or work groups for equipment maintenance, investments (UCI, UNISS, ULT, UC)
4	Improving the activity of Interinstitutional Relations	Change of the name of the Directorate of International Relations to the Directorate of Interinstitutional Relations (UDG, UNISS)
5	The new policies for the Informatization of the country and Communication Management	Creation of general directorates Creation of addresses or departments Convert Communication Departments to Communication Addresses (UDG, UCF)
6	Expansion of forms of payment and components of these	Creation of work groups for attention to teachers, employment, payroll, training, among others. (UM, Cujae, UCLV, UHo, UG)
7	Integration of Defense and Security and Protection	Creation of work group (UM, UG)
8	The new science, technology and innovation (STI) policies	Creation of directions, departments and working groups of CTI, Study Centers, ECTI, UDI (UH, UHo, UG, UO)
9	The outsourcing of services and the lightening of structures	Creation of addresses, departments or work groups (UH, UCPEJV, UM, UDG, UG)
10	The growth of event activity	Creation of addresses, departments and work groups (UH, Cujae, UCLV, UO, UC)
11	Preservation of historical memory and university heritage	Creation of addresses, departments and work groups (UH, Cujae, UCLV, UO, UC)
13	The new organizational figures of the university company policy	Creation of Interface Companies, Foundation, Technological Science Parks, MSMEs (Cujae, UCI, UM, UCLV, UPR)

**Source:** self-made

The identification of regularities of the results in the strategic planning processes, particularly in the last decade, coinciding with the updating of the economic and social model of Cuba and the implementation

of the Economic and Social Policy Guidelines and the National Development Plan allow identify favorable impact of organizational designs.

In a group of transformations, the structural and functional Improvement process of the Ministry of Higher Education in 2019, the latest updates of objectives and tasks contained in the strategic projects, the Monetary and Exchange Ordering process and the new salary regulations approved in 2020, together with the implementation and compliance with the provisions of Decree Law 6 of the year 2020 "On the Government Information System," and Decree Law 3 "On the Documentary Management and Archive System of the Republic of Cuba", between other Policies approved in the country, particularly the System of Programs and Projects of Science, Technology and Innovation, which had their expression in the transformations of the structures in the universities. Likewise, the standard structures for the administrative areas were perfected as they matured and the new tasks were carried out.

The organizational arrangements appropriate to the objectives and strategies and the new policies approved as a result of the implementation of the Economic and Social Policy Guidelines that accompany the updating of the Cuban economic model and the National Development Plan 2030, have resulted in better qualifications of the universities in the quality certifications of their academic programs, and of the institutions themselves, in the fulfillment of the work objectives each period, in demonstrated advances in the international rankings, in cooperation and internationalization and greater visibility and national and international recognition. of its results with greater commitments to local development and with active participation in the social transformation of each territory.

### Conclusions

The structure makes its influence felt in almost all the operations of the organization, it is the cause and effect of many management decisions, it is one of the most important factors in determining the success or failure of the organization, in achieving its objectives and as such, it must be considered when planning the efficiency, effectiveness and quality of services.

The transformations of the organizational designs of the universities in Cuba have been motivated essentially by the public policies resulting from the university reform of 1962, the strategic planning processes and by the development itself, particularly the extension of the university to the municipalities and the policies of science, technology and innovation among others. The organizational structures have been adapted to the strategies and objectives in correspondence with the national and territorial environment through central and/or independent processes.

The transformations carried out in the organizational structures of the universities have had an impact on greater relevance due to new undergraduate and postgraduate programs, better results in research and greater university-society interaction, extensive to the municipalities, which results in a better positioning of the universities through the evaluation of the quality of their programs and institutions in general, which in turn makes them visible in regional and world rankings and commits them to solutions to the scientific problems of the National Development Plan to 2030 and the contribution to the Objectives of Sustainable Development (SDG) defined in the 2030 Agenda for Sustainable Development.

**Bibliographic references**

1. PCC. Conceptualización del modelo económico y social cubano de desarrollo socialista. Lineamientos de la política económica y social del Partido y la Revolución para el período 2021-2026. VIII Congreso. Partido Comunista de Cuba (PCC). La Habana, Abril; 2021. p. 86.
2. Partido Comunista de Cuba. 7mo Congreso del PCC. Documentos del 7mo. Congreso del Partido aprobados por el III Pleno del Comité Central del PCC el 18 de mayo de 2017 y respaldados por la Asamblea Nacional del Poder Popular el 1 de junio de 2017. La Habana: Tabloides, septiembre, 2017. pp. 2-32. [Consulted 21 marzo 2022] Available in: <http://www.granma.cu/file/pdf/gaceta/tabloide%20%20%20C3%BA%20ultimo.pdf>.
3. Díaz-Canel M. Gestión de Gobierno basada en ciencia e innovación: avances y desafíos. Anales de la Academia de Ciencias de Cuba. 2022;12(2). [Consulted 27 marzo 2022] Available in: <http://www.revistaccuba.cu/index.php/revacc/article/download/e1235/1357>
4. Díaz-Canel MM, Delgado M. Modelo de gestión de gobierno orientado a la innovación. Revista Cubana de Administración Pública y Empresarial. 2020;4(3):300-321. [Consulted 27 marzo 2022] Available in: <https://apye.esceg.cu/index.php/apye/article/view/141>.
5. Velázquez R, Pérez M, Ortiz A. Planificación Estratégica y Gestión de la Calidad: Caso de una Institución de Educación Superior Cubana. Revista Cubana de Administración Pública y Empresarial, 2017;1(1):39-50. [Consulted 5 abril 2022] Available in <https://apye.esceg.cu/index.php/apye/article/view/5>
6. Sánchez TdelR, Mayorga HT, Medina A, Ricardo H. Modelo conceptual de gestión de la calidad desde el diseño curricular. Universidad y Sociedad, 2022;14(3):11-21. [Consulted 5 abril 2022] Available in <https://rus.ucf.edu.cu/index.php/rus/article/view/2894>
7. Pérez D, Urquiola O, Alpízar R. Sistema de gestión de calidad de la Universidad de Cienfuegos. Universidad y Sociedad, 2022;14(3), 161-169. [Consulted 5 abril 2022] Available in <https://rus.ucf.edu.cu/index.php/rus/article/view/2853>
8. Tena Millán. Organización de la Empresa: Teoría y Aplicaciones. EADA GESTION, Barcelona. 1989; 25- 80.
9. Zerilli A. Fundamentos de Organización y Dirección General. Editora Deusto, Bilbao 1984; 174-220.
10. Tristán B. Organización en las instituciones de educación superior/ CEPES - UH - La Habana, 2000; 20 (1): 17-32.
11. Mintzberg H. La estructuración de la Organizaciones. La teoría de la Política de Gestión. Published by Ariel Economía 1990; 533-546
12. Bueno E, Cruz J, Duran J. Economía de la Empresa, Edición. Pirámide, Madrid, 1992; 15. 1185-186.
13. Koontz H, Weihrich H. Administración. McGraww-Hill Interamericana. México 8va Edición. 2013; 184- 547.
14. Menguzzato M, Reanu JJ. La Dirección Estratégica de la Empresa. Un enfoque innovador del management. Ediciones Ariel. A. Barcelona. España. 1991: 295- 441
15. Acevedo JA, Acosta M. La Logística empresarial. Editorial Félix Varela. La Habana. Cuba. 2010; 12-23.
16. Stoner JAF, Freeman RE, Gilbert DR. Administración. México: Prentice Hall Hispanoamericana, S.A. ISBN 968-880-685-4. 1996; p. 794.
17. Peña D, Delgado M. Procedimiento para la evaluación integrada del desempeño de una universidad de posgrado. Revista Cubana de Administración Pública y Empresarial. 2020;4(1), 106-121. [Consulted 5 abril 2022] Available in <https://apye.esceg.cu/index.php/apye/article/view/105>



18. Ochoa M, Delgado M. Procedimiento para la formación por roles en la producción de software en la Universidad de Ciencias Informáticas. *Revista Cubana De Administración Pública y Empresarial*, 2018;1(2), 120–132. [Consulted 5 abril 2022] Available in <https://apye.esceg.cu/index.php/apye/article/view/13>
19. Delgado M, Muriel J, Polo JC, Padilla D. (2022). Perfil de competencias de los directivos en cuba y su aplicación en la agricultura. *Revista Cubana de Administración Pública y Empresarial*, 2022;6(1), e194. [Consulted 7 abril 2022] Available in <https://doi.org/10.5281/zenodo.5821770>
20. Tamayo Y, Tamayo JP. El diseño organizacional en las organizaciones (Revisión). *Redel. Revista Granmense de Desarrollo Local*, 4. 2020; 1047-1061. [Consulted 3 abril 2022] Available in <https://revistas.udg.co.cu/index.php/redel/article/view/2000>
21. Alpízar M, Velázquez R. La universidad cubana, su desarrollo y acción en tiempos de COVID19. *Universidad y Sociedad*. 2021;13(5):112-123. [Consulted 3 abril 2022] Available in <https://rus.ucf.edu.cu/index.php/rus/article/view/2217>
22. Perfeccionamiento de la Actividad Económica, MGEF del MES Editorial F. Varela, La Habana. 2017; 1-174.
23. Lauchy A, Alpízar M, Borrás F, Acevedo JA, Carmona M, León G, Velázquez R y otros. Contribución a la gestión económico-financiera del Ministerio de Educación Superior. *Anales de la Academia de Ciencias de Cuba*. 2019; 9 (3): 123-126. Premios de la ACC. [Consulted 3 abril 2022] Available in <http://www.revistaccuba.sld.cu/index.php/revacc/article/download/675/693>

---

University of Pinar del Rio UPR  
University of Guantanamo UG  
University of the Isle of Youth UIJ  
University of Santi Spiritus UNISS  
University of Granma UDG  
University of Las Tunas ULT  
University of the East UO  
University of Havana UH  
University of Holguin UHo  
University of Pedagogical Sciences Enrique Jose Varona UCPEJV  
Technological University of Havana Cujae

### **Conflict of interests**

The authors declare no conflicts of interest

### **Authors contribution**

- Miriam Alpízar Santana: Design, conceptualization, information gathering, writing, review and editing.
- Hismabel Perez Cruz: Data input and processing along with writing.