




CASE STUDY

## A concise analysis of the university's impact on local development in Yaguajay municipality

Breve aproximación al papel desempeñado por la universidad en el desarrollo local del municipio Yaguajay

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**Abstract** This article analyzed the role played by the university in the local development process of the municipality of Yaguajay, with a particular focus on the impact of the Municipal University Center (CUM) in this region. The research examined how this academic institution has actively contributed to the transformation and improvement of local socioeconomic conditions through the integration of scientific, technological, and human resources. Various actions, projects, and strategies promoted by the university were identified, aimed at responding to the specific needs of the community. The study highlighted the importance of the connection between the university and the different social, economic, and institutional actors in the territory, emphasizing that greater articulation and cooperation among them could further enhance the positive effects on local development. Furthermore, it was argued that the university, as a driving force of knowledge and innovation, plays a key role in participatory planning and the implementation of local public policies. In conclusion, it is maintained that strengthening the university-territory link represents an effective way to promote sustainable growth and significantly improve the socioeconomic indicators of the municipality of Yaguajay.

**Keywords** local development, university, Yaguajay.

**Resumen** Este artículo analizó el papel desempeñado por la universidad en el proceso de desarrollo local del municipio de Yaguajay, con un enfoque particular en el impacto del Centro Universitario Municipal (CUM) de este territorio. La investigación examinó cómo esta institución académica ha contribuido activamente a la transformación y mejora de las condiciones socioeconómicas locales a través de la integración de recursos científicos, tecnológicos y humanos. Se identificaron diversas acciones, proyectos y estrategias que han sido impulsadas desde el ámbito universitario para responder a las necesidades específicas de la comunidad. El estudio resaltó la importancia de la vinculación entre la universidad y los diferentes actores sociales, económicos e institucionales del territorio, destacando que una mayor articulación y cooperación entre ellos podría potenciar aún más los efectos positivos sobre el desarrollo local. Asimismo, se argumentó que la universidad, como agente dinamizador del conocimiento y la innovación, desempeña un papel clave en la planificación participativa y en la implementación de políticas públicas locales. En conclusión, se sostiene que el fortalecimiento del vínculo universidad-territorio representa una vía eficaz para promover el crecimiento sostenible y mejorar de manera significativa los indicadores socioeconómicos del municipio de Yaguajay.

**Palabras clave** desarrollo local, universidad, Yaguajay.

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## Introduction

The precarious situation following the fall of the Soviet socialist bloc in the 1990s led to a severe economic collapse, the subsequent declaration of the Special Period<sup>1</sup> and the resulting economic and social measures implemented to withstand the crisis.

In this context, the traditional university, whose scope of work was limited to the practice of technology and science in isolated sectors, ceased to be functional, and its inability to implement a practical policy that would contribute to sustainable development became evident. As a result, the role of knowledge in the country's growth was reconfigured.

As a result, a new strategy emerged focused on bringing higher education centers (HECs) to local communities to encourage socioeconomic development. This strategy was preceded by the UNESCO Regional Conferences on Higher Education in 1996 and 1998 and the World Education Forum in Dakar in 2000.

It was precisely last year when, as part of a Battle of Ideas program<sup>2</sup>, an expansion of university education was carried out, which focused on opening 3,150 higher education institutions (HEIs) in the 169 municipalities of the country.

In this way, municipal headquarters emerged, imbued with each region's particular characteristics. This provided operational capacity for responding to local problems and a perspective focused on the capacity of available resources, the prevailing needs of the local landscape, and the use of knowledge as a source of innovation to foster sustainable development.

In particular, the link between university and locality has led to economic growth in various sectors of certain municipalities in the country. In the practical experience of managing municipal Higher Education Institutions (HEIs) in Yaguajay, integrating higher education, knowledge, science, technology, and society (ESCOCITS) is an exceptional quality.

Likewise, implementing these policies has strengthened the promotion of essential projects, the response to diverse community needs, and the role of intellectual work.

Therefore, the objective of this work is to assess the role played by the university in the local development of the municipality of Yaguajay, based on its academic and scientific contributions.

## Development

According to del Castillo et al. (2007), the link between

the university and local development in the Cuban socio-economic context consists in implementing theoretical and empirical knowledge aimed at addressing the main obstacles to economic growth in regions previously seen as alien to scientific innovations in academia. In this sense, the experience accumulated in the CES is put into practice to support the execution of research and training strategies, thereby contributing to the community. (Andraus et al., 2020).

In Cuba, the University adopts a distinct character from its international counterparts. Consequently, a mercantilist view of knowledge is not adopted, allowing scientists to concentrate on developing, researching, and creating new plans focused on local development, as a pillar of national economic growth (del Castillo et al., 2007). Clearly, it has been proven that academia cannot address all the problems that arise daily on its own, due to limitations in matters such as budget, income, and staff training. However, its integration as a social agent into the efforts of the government and other authorities facilitates the achievement of its ultimate goal: raising society's standard of living.

Thus, in the process of achieving this goal, the Latin Americanist principles of José Martí, as outlined in his essay "Mother America", were followed. The "New University" thus emerged in Cuba, with branch HEIs in the country's 169 municipalities, derived from the main CES (Central Higher Education Centers) in each territory.

This strengthens full access to academic education, while guaranteeing the proper training of human capital and the integration of these new professionals into the search for solutions to the social, economic, and political problems specific to each territory (del Castillo et al., 2007).

As social actors, these new HEIs undertake local activities that include research, prioritize the transfer of technologies and knowledge, and evaluate, adapt, and utilize them efficiently for regional development. All of these actions aim to connect knowledge with social needs.

With the opening of the Municipal University Campuses (SUM), local governments have an institution that integrates a significant portion of the most qualified individuals in the region, who promote networks and knowledge flows between the various educational and scientific actors and institutions. Thus, the scientific activity of professors, students, and researchers is promoted in line with the technological innovation projects implemented in the different local entities and the guidelines for regional development.

The objective of these local university training centers was to achieve a closer connection between academia and the region's needs, hoping to alleviate the growing socioeconomic problems arising from the fall of the socialist bloc and the subsequent Special Period. In this sense, training professionals and developing existing professionals in key locations

<sup>1</sup>Since 1990, Cuba has faced an acute economic crisis identified as the Special Period, which has as its antecedent the stagnation of the country's economy since the previous five years and as its main cause the weakening or rupture of ties with its European Soviet allies, due to the change in its socio-political regime (Chávez, 2000).

<sup>2</sup>The Battle of Ideas comprised a set of programs implemented in various social spheres, defending the advances of the Cuban Revolution, primarily in the areas of social justice and the promotion of internationalism. These programs contributed to significant changes in Cuban society (Chávez, 2000).

are becoming increasingly crucial for developing the country's economy.

It is worth noting that the municipality of Yaguajay in the central province of Sancti Spiritus had to adopt an emergency program to address the new context, beginning with implementing the "Yaguajay Project".

From its inception, "signs of an innovative territory" began to be seen. As early as 1994, the municipality sought the advice of experts from the Pan American Health Organization, the National Institute of Hygiene, Epidemiology and Microbiology, and the National Center for Health Education. The project carried out intensive training activities for the working groups created for this purpose. The project's development strategy was based on the region's experiences (Boffil, 2010).

This project initially emerged in the field of public health when, after approval by the World Health Organization (WHO), it became clear that the "Health for All by the Year 2000" goals would not be achieved globally, potentially leading to a crisis in the global health system. Therefore, it was ideal to highlight and defend the Revolution's achievements in this area since, due to the crisis, many were skeptical about the Cuban state's ability to maintain them.

The experience gained from implementing the "Yaguajay Project" served as the basis for expanding academic-local development linkage programs. Among the main contributions of this initiative are:

The application of systematic learning of people in organizations and social participation to assimilate the knowledge transformation process; cooperation and strategic alliances among all stakeholders interacting in the territory; the use of ICTs to strengthen the flow of information and knowledge between individuals and organizations; project management consistent with the municipality's development strategy and as a way to harness the territory's endogenous potential; and university support to support the management process (Boffil, 2010).

The contributions of the Yaguajay SUM have allowed the municipality to be considered advanced since 2006, with its inclusion in the Ministry of Higher Education (MES) Network: "University Management of Knowledge and Innovation for Development" (GUCID). On this subject, Boffil et al. (2022) recognize that practical experience in the integrated management of universities about Science, Technology, and Innovation (STI) activities for local development has provided a solid foundation for transferring these lessons to other Municipal University Campuses (MUCs) in the country connected to the GUCID. This has influenced the Ministry of Higher Education's (MES) STI policies toward MUCs and a renewed territorial focus.

The initial conception of the curriculum at the MUC Ya-

guajay included a curriculum that systematized experience as a research tool and was relevant to many disciplines, particularly the development of pedagogy oriented toward local development. These practices allowed for the successful integration of knowledge creation through the active role of researchers and various territorial stakeholders in analyzing problems.

Similarly, one of the main objectives within the new university conception was the creation of spaces for debate and dialogue to foster the scientific exchange of experiences, theories, and practical activity results. This translated into greater visibility and reach for the project's achievements through participation in events, book and article publications, discussion forums, and other events.

In this sense, Boffil et al. (2018) argue that the municipal SUM Master's Program, the only one of its kind in the country conceived and developed by a university campus, is beginning to gain importance due to its permanence and efficiency, as well as the various teaching and research activities it includes. These authors also highlight that the program's design allows candidates for a scientific degree to defend their theses within the allotted timeframe.

This is demonstrated by analyzing that 91.3% defended their theses (21/23) according to the schedule established in the academic calendar and (22/23) within the credit validity period (95.6%). All students successfully published their work in high-impact journals, focusing on topics related to the program. These included proposals for ecological diagnosis and management on integrated agroforestry farms, community actions, the management and application of procedures in agricultural enterprises, sociocultural promotion strategies, as well as gender perspectives and communication approaches (Boffil et al., 2018).

Likewise, they participated as speakers in 38 scientific events (local, regional, national, and international). Notable among these were: the 6th International Convention on Environment and Development, the International Meeting on Early Childhood and Preschool Education, the UCLV International Scientific Convention 2019, the 5th International YAYABOCIENCIA Conference 2019, and the 1st International Workshop on Local Development "Yaguajay 2019" (Boffil et al., 2022). Recognition of the role of the Yaguajay SUM in local development allowed this initiative to gain prestige and relevance, achieving a leading role in its territorial projection.

## Conclusions

The curricular approach to university activities in Yaguajay integrates practical experiences in science, technology, and innovation, fostering the generation of relevant knowledge through close interaction with local stakeholders. Higher

education in the region emphasizes comprehensive education, combining academic learning with the development of social and ethical competencies. The university has established strong connections with various sectors of the municipality, actively participating in action-research projects aimed at addressing local challenges. These initiatives, developed by higher education institutions, have had a significant and demonstrated impact on public policies, contributing to the formulation and implementation of strategies that effectively respond to the specific needs of the Yaguajay community.

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## Conflicts of interest

The authors declare that they have no conflicts of interest.

## Author contributions

Edwin C. García-Vivas, Cristian L. Jiménez-Sánchez and Rixy A. García-Ruenes: Conceptualization, data curation, formal analysis, investigation, methodology, supervision, validation, visualization, drafting the original manuscript

and writing, review, and editing.

**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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