

Strategic actions of environmental education in the community La Majagua for its local development

Acciones estratégicas de educación ambiental en la comunidad La Majagua para su desarrollo local



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ABSTRACT

Local development is a topic prioritized by the Cuban State as well as everything related to environmental education, since it is a transversal sphere that affects the sustainable and harmonious development of many localities. One of the closest actions that the country experiences today in this regard is the Articulated Platform for Territorial Integral Development in Cuba focused on all the essential components of a society, where the environmental process also plays a fundamental role. The objective of this research is to design a set of strategic actions of environmental education in the community La Majagua for its local development. Theoretical and empirical methods were applied, and the application of the SWOT matrix was very useful to obtain an overview of the local situation

RESUMEN

El desarrollo local es un tema priorizado por el Estado cubano, así como todo lo relacionado con la educación ambiental, ya que es una esfera transversal que afecta el desarrollo sostenible y armónico de muchas localidades. Una de las acciones más cercanas que hoy experimenta el país en este sentido es la Plataforma Articulada para el Desarrollo Integral Territorial en Cuba enfocada en todos los componentes esenciales de una sociedad, donde el proceso ambiental también juega un rol fundamental. La presente investigación tiene como objetivo diseñar un conjunto de acciones estratégicas de educación ambiental en la comunidad La Majagua para su desarrollo local. Se aplicaron métodos teóricos y empíricos, y fue de mucha utilidad la aplicación de la matriz DAFO para obtener una perspectiva

regarding its local development. It was obtained, four strategic lines that developed through extension actions will lay the foundations for a new vision of local development and the process of environmental education in the community.

Keywords: local development; community; environmental education; strategy; university extension

general de la situación local respecto a su desarrollo local. Se obtuvo, cuatro líneas estratégicas que desarrolladas a través de acciones extensionistas sentaran las bases para una nueva visión del desarrollo local y del proceso de educación ambiental en la comunidad.

Palabras claves: desarrollo local; comunidad; educación ambiental; estrategia; extensión universitaria

INTRODUCTION

Higher education constitutes a space that concentrates and at the same time reflects the multiple facets of local and social development (G. R. González & González, 2006). Such situation becomes imperative for higher education to prioritize the constant improvement of its substantive processes: teaching, research and extension, with the objective of fulfilling its mission of favoring an attitude of change and social transformation through professionals who graduate from universities, starting from an increasingly integral formation and a consequent ethical conscience. Although the three substantive university processes have to contribute to this purpose, it is in particular the extensionist process to which by its essence and objective corresponds the leading role to face from the universities this new stage of development and expansion of access to integral culture by our people (G. R. Gonzalez & Gonzalez, 2006; V. Gonzalez & Gonzalez, 2006; G. R. Gonzalez & Gonzalez, 2006). González, Giraldo, & Estrada, 2014; Tünnermann, 2008).

In this new stage, the State gives significant weight to the University in the local development of each territory from

different perspectives, and where the environmental situation is one of the prioritized lines of research in each province because it is a transversal problem that affects the development of many localities. And this is achieved with adequate public management, the administration's main aspiration is to be increasingly more effective and efficient in the responses offered to the State, citizens and other actors of society (Machín Hernández, Sánchez Vignau, López Rodríguez, & Puentes Álvarez, 2019). And this public management needs, among other aspects, to articulate the strategies of local development with the strategies of internationalization; it is required more than ever to articulate the different actions of local development with the bilateral and multilateral programs for development. And one of the closest actions that the country is experiencing today in this sense is the Articulated Platform for Integral Territorial Development in Cuba (PADIT) (Gorgoy Lugo & Torres Páez, 2019) focused on all the essential components of a society, where the environmental process (Capote Pérez & Torres Páez, 2018; Garrido Cervera, González Pérez, Casas Villardel, & Figueroa Sierra, 2015) has a transversal role in all the harmonious

development of a territory, region or country.

The wide range of environmental problems requires the mobilization of all actors to meet the challenge and jointly formulate responses to the problems. All of this requires the development in people's minds of a new way of looking at the environment, by educating in the conceptual and attitudinal, in order to contribute to the development of a positive environmental quality through the solution of environmental problems on a local scale (V. González et al., 2014; Sánchez Santamaría, González González González, Dueñas Bravo, & Corrales Valdés, 2010).

This research focuses on one of the edges of local development, the environmental component, analyzing La Majagua community of the Popular Council Puerta de Golpe of Consolación del Sur municipality, Pinar del Río. In this locality different investigations have been carried out previously (Marín de León, Rivera Rodríguez, Labrador Machín, & Álvarez Velázquez, 2016; Mirabal González, 2014; Santana Ges, González Hernández, Hernández Martín, & Pelegrín González, 2016) in which the prevalence of diverse problems related to local development from different perspectives has been evidenced. In this sense, this research considers, based on the bibliographic review carried out, that there is a partial and sometimes isolated treatment of the aspects related to the knowledge, perception and sensitivity of the population in the face of these community problems with no projection of solutions towards know-how.

Taking this problematic situation as a starting point, the present study aims to design an action strategy that will be inserted into the educational and extensionist project of the students of the

Municipal University Centre of Consolación del Sur to contribute from instruction to the local development process and to the environmental education of the community of La Majagua. The results of this research intend to propose a set of actions to develop strengths, reduce weaknesses, locate and take advantage of opportunities and reduce or avoid threats found in the community in relation to its environmental problems and the process of local development.

MATERIALS AND METHODS

The research was carried out in the community of La Majagua of the Popular Council Puerta de Golpe of the Municipality of Consolación del Sur in the Province of Pinar del Río Cuba. The SWOT matrix was applied, which is a tool that allows us to obtain an overview of a strategic situation. Group interviews and brainstorming were conducted to obtain and analyze the external and internal forces that facilitated the identification of positive and negative elements within and outside the community related to health and environmental problems and the process of community health and environmental education.

Upon entering the Community and after creating a climate of mutual trust, respect and identification of community leaders, the promoter or facilitator group was formed. The group was composed of 15 participants, showing among other things voluntariness, motivation and sensitivity towards environmental problems, as well as the capacity and willingness to assume the educational and communicative work according to their environmental conditions to multiply knowledge among others.

Among the extensionist actors of the University and the promoter group elaborated, a set of internal forces were found that are related as follows (Table 1):

Table 1 - Internal forces

Internal forces	
Strengths	Weaknesses
<ul style="list-style-type: none"> • There is an organized popular council that allows the introduction of the environmental education strategy in La Majagua community. • There is a willingness to identify and solve environmental problems in La Majagua community. • Human resources prepared to join the environmental education process in La Majagua community. • The members of the community have a high sense of belonging and rooting to the community with a high sense of identity and solidarity. • Considerable presence of people of working age. 	<ul style="list-style-type: none"> • Lack of an Environmental Education Intervention Strategy for the community to encourage group reflections on the matter. • There is a partial, and sometimes isolated, treatment of aspects related to knowledge, perception and sensitivity of the population to the problems of the Community Environment without projection of solutions to the know-how. • There are insufficiencies in the joint coordination of environmental education actions that contribute to responsible environmental behaviour. • Low levels of communication, commitment and integration (massive and interpersonal) on environmental problems and their solutions. • Ignorance of current Environmental Legislation.

The external forces present in the community context were also determined (Table 2):

Table 2 - External forces

External forces	
Opportunities	Threats
<ul style="list-style-type: none"> • Outstanding participation of national, provincial and local mass media. • Support from political and mass organizations. • CITMA exists as the body of the Central Administration of the State in charge of proposing environmental policy and directing its execution. 	<ul style="list-style-type: none"> • From the institutional point of view, the actions carried out in the formation of an environmental education to contribute to personal and social responsibility and commitment to the Environment are insufficient.

<ul style="list-style-type: none">• Existence of a Municipal Government identified with the environmental problems of the community and the municipality.• High disposition and preparation of the professionals of the Municipal University Center to carry out the formative processes, strategies and projects through the participation and educational investigation as contribution to the environmental transformation of the community.• Possibility of financing through twinning projects with other communities.	<ul style="list-style-type: none">• Increase in communicable diseases• Climate change.• Re-emergence of a group of diseases.
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This situation, addressed with the analysis of external and internal forces, imposes the elaboration of an extensionist strategy for the development of environmental education in the community of La Majagua.

RESULTS AND DISCUSSION

The strategy, the result of this research, was designed in such a way that in its cyclical development it allows a continuous and systematic optimization of the environmental education process in La Majagua community, as well as a holistic vision of the state of the local development of the territory. It consists of a set of elements that were based from the system approach, and it was constituted by the following components:

- Introduction: It explains the fundamentals of the strategy
- Diagnosis: Determined through the analysis of the internal and external forces that influence

environmental education in La Majagua community.

- General objective: In its proposal, the desired state of the environmental education process in La Majagua community is specified.
- Specific strategic actions: The strategic actions with their respective operations and indicators are described through the SWOT matrix.
- Evaluation of the strategy: The way in which the degree of compliance with the specified indicators is verified is proposed.

Introduction of the strategy

The process of environmental education in La Majagua community of the Popular Council Puerta de Golpe manifests itself as systemic, empirical and conditioned by low levels of communication, commitment and integration for the solution of negative environmental impacts in the community. In this sense, the knowledge of environmental education is oriented to the training of the inhabitants of the community to achieve in them a

responsible attitude towards the environment. For this, it is necessary to modify behaviors and styles of coexistence, including the development of values and attitudes.

Starting from these premises an extensionist strategy was elaborated where all the members of the community are implied, counting on the support and protagonism of the social factors, to jointly achieve the agreement of the institutions of the locality in the development of extensionist actions of environmental education. And to elaborate actions that allow to develop strengths, to reduce weaknesses, to locate and to take advantage of opportunities, as well as to diminish or to avoid found threats, the referred matrix SWOT was applied from where a general perspective of the real situation of the community with respect to its local development was obtained.

At this stage, a set of actions was developed, determined by objectives that pursue change, and where emphasis was placed on the means and ways to achieve it in addition to defining their respective evaluation.

Diagnosis for the conception of the extensionist strategy for the development of environmental education in the community of La Majagua.

The objective of the diagnosis is to look for a coherent structure for the strategy, based on different opinions and criteria as a result of the dialogue established with the beneficiaries involved. Another essential aspect related to community environmental education at this stage is the definition, sensitization and awareness of the main limitations presented by each of its members of the collective and the

community in general, in the mastery of the main environmental problems and how to carry out the solution of them.

In this sense, the university extension also fulfills a diagnostic function, and from this perspective it must be conceived, as it makes it possible to determine the potentialities, limitations and needs of those involved in this process, which in turn guarantees the projection of new intervention actions for the sake of the cultural development of the University and Society. The results obtained from this diagnostic stage are reflected in the materials and methods section of this document, where the external and internal forces are illustrated, as well as the component of strengths, weaknesses, opportunities and threats present in the territory with respect to its local and environmental development.

General strategic objective

Problem: How to conceive the extensionist process of environmental education in the community of La Majagua as a systemic process, structured in a complex of planned influences that tribute to the favorable modification of Local and Environmental Development in the community of La Majagua?

Objective of the strategy: To implement extensionist actions of community environmental education from a systemic and integral approach of Local Development, which contributes to the modification in a favorable sense of La Majagua community.

Strategic actions determined from the SWOT matrix

The actions of the strategy are shown through the strategic analysis in table 3.

Table 3 - Strategic analysis

SWOT Matrix		EXTERNAL	
		OPPORTUNITIES	THREATS
I N T E R N A L	STRENGTHS	Identification of the needs of the community environmental education process in La Majagua community with a holistic, multidisciplinary and intersectoral approach. (S+O)	Identification of the needs of the community environmental education process in La Majagua community with a holistic, multidisciplinary and intersectoral approach. (S+T)
	WEAKNESSES	Development of voluntary and participative actions for the transformation of the environmental problems of La Majagua community. (W+O)	Development of voluntary and participative actions for the transformation of the environmental problems of La Majagua community. (W+T)

Source: Own elaboration

Development of strategic actions in the community of La Majagua

1. Identification of the needs in La Majagua community with a holistic, multidisciplinary and intersectoral approach to Local Development (Table 4).

In this case, the diagnosis fulfils a double function: on the one hand, it facilitates the definition of the assignment of the

community in the process of community environmental education based on the possibilities and limitations of its present action, the real technological capacity of those in charge of its development and the felt needs of the community itself, and on the other hand, it pays tribute to the awareness, sensitization and commitment of a large number of people involved in the process of Local Development of that territory.

Table 4 - Identification of the needs in the community of La Majagua

Problem: La Majagua community is not aware of the need for change to solve its main problems.
Objective: To identify the needs of the community environmental education process in La Majagua community with a holistic, multidisciplinary and intersectoral approach to local development.
Location: La Majagua Community
Indicators: Level of knowledge of the need for change in the process of environmental education for the solution of environmental problems.

Operations	Activities	Participants	Evaluation forms
1. Determine the main environmental problems in the community La Majagua.	Tour to determine the main environmental problems in La Majagua community by formal and non-formal leaders.	Formal and non-formal leaders, facilitating group	Observation
	Development of socialization workshops of the results found in the identification of the main environmental problems in the community La Majagua by formal and non-formal leaders.	Community members, facilitating group	Discussion groups
2. Evaluate the situation of the environmental education process in the community of La Majagua.	Workshop for the community to present the environmental education activities they know.	Community members, facilitating group	Discussion groups
3. Identify the potential for developing the environmental education process.	Contest of different artistic manifestations on the subject of the environment and its incidence in the economic, social and cultural plane.	Community members, facilitating group	Observation

Source: Own elaboration

2. Training of La Majagua community through participatory activities (Table 5). The preparation of the community is an essential variable, because from the knowledge of the environmental problems and ways of solution, the desired change will be able to take place.

Table 5 - Training of the community of La Majagua

Problem: Insufficient knowledge about the process of environmental education and local development of the different social actors of La Majagua community.
Objective: To train La Majagua community through participatory activities.
Place: La Majagua Community
Indicators: Level of knowledge of the community. Level of impact of community training in solving environmental problems.

Operations	Activities	Participants	Evaluation forms
1. Training of environmental education facilitators for formal and non-formal community leaders	Conferences by specialists for the training of environmental education facilitators for formal and non-formal community leaders, as well as selected population.	Community members, facilitating group	Observation
2. Implement a system of activities that facilitates training on its main environmental problems with the active participation of La Majagua community.	Workshops with the community for the analysis of its main environmental problems.	Community members, facilitating group	Discussion groups
	Development of neighborhood debates with the intervention of the family doctor and nurse on issues related to public health.	Community members, facilitating group	Discussion groups
3. Implement a system of activities that facilitates training on possible solutions to their environmental problems with the active participation of La Majagua community.	Workshops with the community for the analysis of possible solutions to their main environmental problems.	Community members, facilitating group	Discussion groups

Source: Own elaboration

3. Development of voluntary and participative actions for the transformation of the problems of La Majagua community (Table 6).

Local development and environmental education must integrate knowledge, attitudes and actions, and not only inform about a specific problem, but also find answers or solutions to stop and avoid the deterioration of the environment and the

territory in general; even more, it is a question of assuming and understanding the problem and acting on it. Actions must be directed towards the creation of new thoughts, complex visions of realities, exchanges of knowledge and ignorance, systemic and interdisciplinary approaches, vital accompaniment for the re-knowledge of the world and the re-orientation of new individual and group, local and global actions.

Table 6 - Actions development

Problem: There are shortcomings in the joint implementation of training actions.			
Objective: To develop voluntary and participative actions for the transformation of the problems of La Majagua community.			
Place: La Majagua Community			
Indicators: Increasing the quality of life of the community			
Operations	Activities	Participants	Evaluation forms
1. Convene and motivate the entire community to carry out actions that generate solutions to the community's environmental problems.	Planting of native fruit and timber trees in the community of La Majagua.	Community members, facilitating group	Observation
	Selection of sustainable yards in the La Majagua community.	Community members, facilitating group	Observation
	Cleanliness and sanitation of the community.	Community members, facilitating group	Observation
2. Reflect on the changes that take place in the community once the environmental problems have been solved.	Workshops with specialists to reflect on the changes obtained in the community and analyze other possible actions to be carried out.	Community members, facilitating group	Discussion groups

Source: Own elaboration

4. Promotion of educational processes and activities aimed at solving problems in the Majagua community (Table 7).

This action is of vital importance, and through it, the knowledge of community environmental education is increased, as well as the motivation towards the execution of these processes, since the educational work carried out in the different contexts is reflected and recognized by dissimilar ways.

Environmental education should be an activator of environmental awareness, aimed at promoting the active participation of teaching in the conservation, use and improvement of the environment, becoming a basic aspect for comprehensive education, emphasizing the achievement of positive attitudes and responsible behavior in subjects, from the development of strategies that encourage participation and social commitment (Spain Perez & Gonzalez Garcia, 2011).

Table 7 - Promotion of processes

Problem: Environmental education processes and activities that sensitize and motivate the solution of environmental problems in the community of La Majagua are not promoted.			
Objective: To promote environmental education processes and activities aimed at solving environmental problems in the community of La Majagua.			
Place: La Majagua Community			
Indicators: Increased community motivation for community environmental education activities			
Operations	Activities	Participants	Evaluation forms
1. Create different spaces in the community where different environmental problems are disseminated.	Provide a space in the locality for environmental education activities.	Community members, facilitating group	Observation
2. Promote diverse solutions to environmental problems.	Make posters showing solutions to the community's environmental problems.	Community members, facilitating group	Observation
	Debate for the exchange of experiences by the different actors of the community.	Community members, facilitating group	Discussion Group
3. Manage and disseminate through different media, environmental education activities to be carried out by the community.	Creation of community videos related to the environmental education activities they carry out.	Community members, facilitating group	Discussion and observation group
	Organization of a gallery of images of the community related to the environmental education activities they carry out.	Community members, facilitating group	Observation
	Management of the diffusion in the different mass media of videos and images of the community related to the environmental education activities they carry out.	Community members, facilitating group	Observation
4. Create a favorable climate in the whole community that motivates them towards the execution of environmental education activities.	Organization of festive activities to highlight achievements.	Community members, facilitating group	Discussion and observation group

Evaluation of the strategy

The evaluation is part of the structure of the strategy to improve the extensionist process in La Majagua community, and as a control element it must be flexible, while at the same time requiring objectivity in the analysis of indicators or measurement criteria that seek to determine the effectiveness, efficiency and relevance of the strategy. To conceive the evaluation of the strategy implies to determine the indicators for each strategic action in its link with the required operations, and to submit them to consideration by the responsible and beneficiaries of the same one, in such sense the indicators must be elaborated in measurable terms, either qualitatively or quantitatively, with their respective verifiable indicators.

The elaboration of the strategy for La Majagua community of the Puerta de Golpe Popular Council of Consolación del Sur municipality, as well as its implementation with community participation, constituted a dynamic, conscious and reflexive process under constant construction. Active participation, in addition to the students, was of great importance in the entire process of improving Local Development. The students started from the real problems of the community, which is significant because that is where their need to transform reality really arises, and that is where in this attempt to transform the problems of the community, the motivation that has to exist in every student and researcher arises, which becomes the sufficient condition to consciously dynamize instruction and research. All this indicates that the social actors of this community must achieve an environment of need for learning and environmental education within the framework of an educational environment (Lezcano Gil, Suero Gutiérrez, & Casas Villardel, 2015), also taking into account

the perspective of local development planned in the territory.

The determination of the extensionist actions for the development of the community La Majagua, determines the essential patterns to establish the conditions that, in the order of the communication, the coordination between the different levels and the creation of a favorable climate, among others, lays the bases for a new vision of this community process. The objectivity in the final evaluation of the strategy will give a greater degree of validity to it and will allow its revision for adjustments and updating in such a way that, as an instrument of transformation, it constitutes a useful product for the improvement of the process in La Majagua community.

In this dynamic, the student, together with the constituted promoter team, learns to express what he thinks and feels; but also, learns to capture the thinking and feeling of the interlocutors. They developed not only individual communication, but also group dynamics for the benefit of local development. In this process the student becomes the object and subject of the process at the same time, to such an extent that he or she becomes individualized, personified and, as he or she feels committed to it, makes this process his or her own, society gives it a characteristic stamp and brings new qualities to the formation of the student's personality, and he or she is prepared to strive to achieve his or her objectives in a constant relationship with the community, which also strengthens the University-Society binomial as a function of Local Development.

This research shows how the educational and extension projects of the universities should be developed in response to the

demands of the environment, based on the felt needs of the community. In particular, the designed strategy inserted in the educational and extensionist project of the University Municipal Center of

Consolation of the South contributes to the improvement of local and environmental development in the community of La Majagua on solid theoretical bases and with a strong scientific foundation.

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