

## **GEOGRAPHIC POTENTIALITIES OF LAS PEONIAS LAGOON (VENEZUELA) AS A NATURAL MUSEUM FOR THE TEACHING OF PHYSICAL GEOGRAPHY**

Ramón Labarca; Belmary Barreto; Jorge Bernal

From within Venezuelan education, the teaching of Geography has been immersed in a didactic reality where the teacher is perceived attached to a traditional teaching, being his only pedagogical support the textbook, leaving out the innumerable range of strategies and didactic resources that are currently a milestone in the school practice of Geography, especially those related to the students' close context.

Given the aforementioned situation, contemporary thinkers committed to the teaching of Geography have focused their research and pedagogical efforts on the implementation of the Venezuelan natural landscapes for the teaching of the contents of the Geography of Venezuela. Among them Montiel and González (2012) stand out, using the Island of Toas for the teaching of external geodynamic processes; Labarca and Chourio (2016), urge to make use of the landscape of the Mucubají Lagoon to encourage the learning of glacial morphology; and Barreto and Bernal (2016), propose the landscape of the Paraguaná Peninsula for the teaching of coastal morphology.

The natural landscape has a determining role in the transmission of the knowledge of Geography, especially those related to the components or elements of the physical environment, since the relief, vegetation, climate, weather, geological structures, exogenous processes of The land, among others, are elements that the student can observe in a tangible way when visiting a natural landscape and approaching its geographical composition.

For this reason, and in accordance with the guidelines proposed by Zoido (2010), landscapes act as true natural museums that turn out to be attractive, dynamic and pertinent with respect to their incorporation into the teaching school practice, since it

offers the possibility of observing tangible way geographic processes that are difficult to show in the limited reality of the classroom. Therefore, the natural landscape resembles a museum in which the pieces (physical and social elements) can be observed in an orderly fashion, forming a single set, and serves as a teaching medium for the geographical interrelationship of the medium.

According to the aforementioned, it is therefore necessary that those responsible for the teaching of Geography achieve, through renewed resources and strategies, to link the student with the geographic processes directly from the reality where they occur, in this way learning will be meaningful, active and inclusive, since it will obtain a general and specific vision of the geographical concepts that are theoretically treated in the ordinary sessions of classes.

Therefore, in order to use the landscape as a natural museum in the teaching of Physical Geography, the teachers of General Media Education must select, propose and design innovative and accurate teaching resources that allow such an end. Under this premise, the geographical itineraries, guided tours, excursions and natural museums, would be ideal options to implement the field work towards local landscapes.

Venezuela, as a tropical country, has countless landscapes that serve as natural museums and are conducive to the educational practice of Geography. Specifically, in the state of Zulia, numerous landscapes are outlined that have in themselves a series of geographical potentialities worthy of being addressed through research and teaching. To illustrate, the scenario of Las Peonias Lagoon stands out as a true teaching museum. The aforementioned lagoon complex is located northeast of the Maracaibo Strait, between the Maracaibo and Mara municipalities, in the Idelfonso Vázquez parish, located astronomically between the coordinates 10°43'10 "and 10°45'50" of Latitud Norte and 71°35'02 "and 71°40 '50 "of West Longitude.

Las Peonias Lagoon, as a didactic scenario, offers in its physiognomy the observation, analysis and understanding of various processes and geographical elements, including: lagoons, mangroves, tropical climate, sedimentation processes, beaches, coastal dunes, anthropic intervention, problems socio-environmental, among others. Due to these considerations, the article aims to propose the use of the geographic potentialities of Las Peonias Lagoon scenario as a natural museum that stimulates the teaching of local physical geography. The proposal is materialized by a guided tour with five (5) stations on the selected landscape, aimed at students of the 3rd year of General Media Education.

From the methodological point of view, the article focuses on being a descriptive and projective investigation. It is descriptive, since it is necessary to characterize the landscape and geographic potentialities of Las Peonias Lagoon that serve as a didactic input for

the teaching of the physical environment in the subject Geography of Venezuela, as well as to describe the educational reality of the aforementioned subject in the institutions selected students as an object of analysis. On the other hand, it is projective, since it seeks to generate a didactic proposal cataloged as a guided tour on the natural setting of Las Peonias Lagoon.

The proposal that derives from this research, projects to give solvency to the absence of strategies and didactic resources based on natural landscapes for the teaching of the Physical Geography in the institutions Private School “San José de Calasanz” and Educational Unit Adventist School “Sierra Maestra “, Both located in the Sierra Maestra sector of San Francisco municipality, Zulia state, Venezuela.

The design of the research is field and not experimental. The search for information directly from the educational reality of the aforementioned schools and the natural scenario of Las Peonias Lagoon, inserts research into a field design. The non-manipulation of the data obtained from the study variables, catalog the study as non-experimental. The field design is closely related to the documentary phase in the investigation. Through it, it is possible to obtain the methodological procedure for the elaboration of a guided tour based on the geographical potentialities of Las Peonias Lagoon as a natural museum.

In reference to the study population, it is considered census. It consists of 124 students of Geography of Venezuela subject of the 3rd Year of General Education for the school year 2016-2017, 58 belonging to the Private School “San José de Calasanz” and 66 students of the Educational Unit Adventist School “Sierra Maestra “ The variables of this study are measured from the selected population: didactic resources used by the teachers and level of knowledge of the students about the geographical potentialities of Las Peonias Lagoon.

Likewise, within the methodological framework, several techniques and data collection instruments are used for the investigative purposes of the study variables. The survey highlights the main technique, materialized through the instrument of the questionnaire. This is a self-administered type, which was applied to the students of the mentioned educational institutions, with a total of 25 items with answer alternatives YES-NO. Another technique used is direct observation during the field inspection. The instrument selected for the aforementioned technique is the observation form, which records the presence of the geographical, geomorphological and environmental elements that are exhibited in Las Peonias Lagoon, describing its primordial characteristics and didactic usefulness.

Another technique used is the documentary review, for which the selected instrument is the registration matrix. Through it, it is possible to record the information compiled through a series of books, articles, theses, blogs, among others, which are the theoretical

foundation of the research. The instruments were subjected to the validity of four (4) experts from the areas of Physical Geography and didactic Geography, resulting in relevance for its application.

However, with regard to the results of diagnostic type, these were extracted from the questionnaire applied to the students attending the course Geography of Venezuela in the selected school institutions, and were subjected to categorization through the implementation of a scale of interpretation (proposed by Briones, 1990). Among the results for the dimension “didactic resources” used by teachers in the teaching of Geography of Venezuela, highlights that more than 80% of respondents say that the teacher does not use the “natural resources” and “directed resources” in teaching, that is to say, there is nullity in the application of works of fields, geographical itineraries or guided visits to local, regional or national natural landscapes as a stimulus for the learning of geographic contents.

On the other hand, in the dimension “level of knowledge” that the students possess about the geographical potentialities present in the scenario of Las Peonias Lagoon, is measured by contrasting the data obtained with a scale of interpretation (Briones, 1990). According to the results obtained, the students who are study population present weakness in the domain of knowledge, since more than 60% responded incorrectly to the items that group the indicators “location”, “vegetation mangrove forest”, “fauna characteristic “,” depth “and” hydrography “of Las Peonias Lagoon. Likewise, in the items that agglomerate the indicators “presence of lagoons”, “presence of coastal dunes”, “sedimentation” and “anthropic degradation” of Las Peonias Lagoon, the results show that more than 75% of the population of The study responded incorrectly, which shows weakness in the domain of knowledge.

The trend reflected in the results show two educational aspects that have encouraged the proposal of this research: on the one hand, the clear absence of didactic resources based on local natural landscapes for the teaching of the contents of the Geography of Venezuela; and on the other, the lack of willingness of students to assimilate geographical knowledge from their nearby natural spaces, precisely because of the non-use of fieldwork, such as guided visits, by teachers. For this reason, the research proposes a guided tour of the geographical potential of Las Peonias Lagoon to boost the teaching of Physical Geography in General Media Education.

To illustrate, Las Peonias Lagoon is a picturesque lagoon complex located between the Maracaibo and Mara municipalities of Zulia state (Venezuela), specifically northwest of the Maracaibo Strait in the Idelfonso Vázquez parish. It is a scenario of coastal origin that has a width of 2,200 m and an average depth of 0.70 cm. Geomorphologically corresponds to the depression of Lake Maracaibo and is considered one of the most important natural reservoirs of the Zulia region.

Among the geographical potentialities of Las Peonias Lagoon, it stands out that it has a flat relief from 0 to 20 m of altitude, with predominance of shores of newly formed beaches and islets; presence of mangrove forest vegetation characteristic of coastal wetlands; dry tropical forest climate with thermal variations of 24° to 33°; hydrography represented by four (4) intermittent streams called spouts or gullies that border and flow into the water mirror; sedimentary processes derived from pipes that pour materials into the lagoon; Lacustrine coastline composed of sandy loam soils and coastal dunes; environmental problems due to human intervention, among others.

These particularities of Las Peonías Lagoon complex make this space a true natural museum that can dynamize in an analytical, critical and reflective way the geographic contents of the physical environment in the subject Geography of Venezuela. Therefore, in consideration of the authors, the physical-natural and socio-environmental ornaments that have a handle on the aforementioned mirror of water, make this space a natural scenario with multiple educational facets, which must allow the acquisition of significant learning students who visit it, provided they have the appropriate strategy applied by the teacher guide.

For such considerations, the proposal that is derived from this projective investigation is materialized through a guided tour of the water complex of Las Peonias Lagoon. Guided tours are an effective resource in the hands of the teacher as it allows you to plan field trips to places of academic and recreational interest for students, from which they will obtain experiential learning and in a different way to those acquired in the classroom. classes (Antúñez, 2003). Through the guided visits, the teacher can awaken in the students an interest in the acquisition of experiential knowledge; encourage scientific research; promote sensitivity for the preservation of natural spaces; and contribute to the improvement of the teaching of Geography.

Thus, the design of the guided tour based on the geographical potential of Las Peonias Lagoon, is oriented to a day of field trip through a tour of five (5) stations to meet in the north-east portion of the lagoon complex selected. The stations are oriented to the study, understanding and evaluation of the geographical, geomorphological and socio-environmental features present in the area. The guided tour entitled “Laguna de las Peonías, scenario of physical processes of the Earth”, is presented in printed form as a teaching resource, counting each station with title, location in the study area, achievement competition, recommended materials, theoretical aspects to consider and evaluation activity.

Among the objectives of the guided tour of the Las Peonias Lagoon as a natural museum, the following stand out: provide an innovative didactic resource consisting of a guided tour based on Las Peonias Lagoon scenario that contributes to the teaching and learning of geographical features of the physical environment; and provide teaching

tools that encourage the student to identify the geographical features exhibited in the scenario of Las Peonias Lagoon. The stations of the guided tour are: 1) Formation and geomorphological origin (of Las Peonias Lagoon), 2) Geographical characterization, 3) Sedimentation in the lagoon, 4) Coastal landscape, dunes and beaches, and 5) Environmental degradation of the lagoon.

Station 1 “Formation and geomorphological origin”, has as competition of achievement the identification of the geomorphological origin of Las Peonias Lagoon whose physiognomy corresponds to a lagoon. Among the aspects or geographic contents to be considered at the station, the teacher must explain the location of the lagoon and its geomorphological origin, highlighting geographical concepts such as coastal drift, marine arrow, littoral bar and lagoon. Once the pedagogical explanation has been completed, as an evaluation activity the teacher must apply the technique of “descriptive illustration”, with which each participant is given a copy of the satellite map of Las Peonias Lagoon, and on it they must indicate: Geographical location, lagoon and bar or coastline with its respective definition.

For Station 2 “Geographical characterization”, the students’ signage of the geographical features that are exhibited in Las Peonias Lagoon is traced as an achievement competition. The aspects or geographical concepts that the teacher must address in this season are relief, vegetation, climate, hydrography and fauna characteristic of the lagoon complex under study, and at the end of it apply the activity “synoptic table” as evaluation. In this table, students must capture the geographical characteristics of Las Peonias Lagoon.

In Station 3 “Sedimentation in the lagoon”, the achievement competition is one in which the student, once the season is over, will be able to explain the sedimentation process that takes place in the lagoon mirror of Las Peonías as a consequence of the decanting of the pipes or ravines that surround it. Pedagogically, the teacher must address the concepts of drainage networks, pipes or ravines and sedimentation as a geological process. The evaluation activity to be applied in this station is called “Acrostic”. In their notebook, each student has to put together an acrostic from the word “sedimentation”, explaining how this process occurs in the lagoon mirror of Las Peonías.

Next, in Station 4 “Coastal landscape, dunes and beaches”, it is traced as an achievement competition in which the student, having finished the season, manages to describe the genesis and morphology of the coastal landscape in Las Peonias Lagoon composed by dunes and beaches. Among the aspects or geographical concepts that the teacher must address is the Marian sedimentation, beaches and coastal dunes, with their respective characteristics present in the lagoon visited. In this season, the evaluation will consist of a “Photographic Record” of the coastal relief of the lagoon, which will serve so that each student later designs and presents a digital advertising poster through social networks.

Finally, in Station 5 “Environmental Degradation of the Lagoon”, the achievement competition is oriented to the student having the ability to understand the physical and human factors that affect the environmental degradation of Las Peonias Lagoon. Therefore, the main geographical concepts for this season are environmental degradation, sewage, housing construction and garbage accumulation. Once the season is over, the teacher asks the students to prepare a conceptual map defining the factors that deteriorate the environmental balance of the lagoon. All activities will be archived to present a “Teaching Portfolio” in the classroom.

As a result of the investigation, a series of conclusions are derived. The first of them emphasizes that when making the diagnosis of the didactic resources used by the teachers in the teaching and learning processes of the subject Geography of Venezuela in the educational institutions Private School “San José de Calasanz” and Educational Unit Adventist School “Sierra Maestra “, more than 80% of respondents agree that the teacher does not use” directed resources “and” natural resources “, which shows the absence of field trips to local natural landscapes for teaching geographic processes.

As a second conclusion, in the search to investigate in the level of knowledge that the students of the Geography of Venezuela subject have with respect to the geographical potentialities present in the scenario of Las Peonias Lagoon, there is evidence of weakness in the knowledge domain according to the scale of interpretation used, since more than 75% did not succeed in the items that group the indicators “hydrography”, “characteristic fauna”, “presence of lagoons”, “presence of beaches and coastal dunes” and “sedimentation processes”. For this reason, the research proposes to use the geographic potentialities of Las Peonias Lagoon to boost the teaching of the Geography of Venezuela.

On the other hand, as a third and final conclusion, it is necessary to generate and design a guided tour based on the scenario of Las Peonias Lagoon as a natural museum for the teaching of Physical Geography. The guided tour is made in a stationary, creative and appropriate to the student population to which it is directed, with a total of five (5) stations to meet during a day of field trip to the lagoon complex. Each station has title, location, achievement competence, materials to be used, theoretical aspects to consider and evaluation activity to be carried out during and after the field.

