

***Concepción didáctica de educación ambiental en el
profesor de Historia y Ciencias Sociales.
A didactic conception of environmental education on
History and Social Sciences' teachers***

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Resumen: El presente artículo responde a una demanda social y a la necesidad de revelar lo ambiental en el sistema de conocimientos de las asignaturas que se imparten en el currículo de la carrera Historia y Ciencias Sociales a partir de las potencialidades que este ofrece. Tiene como objetivo sistematizar una concepción didáctica de educación ambiental para el profesor en formación al asumir criterios pedagógicos y didácticos del proceso de enseñanza aprendizaje al utilizar tres niveles de sistematización como método de investigación.

Palabras clave: Educación ambiental, Criterios pedagógicos y didácticos, Enseñanza-aprendizaje, Conocimientos

Abstract: This article responds to a social demand and the need to reveal the environmental aspects in the knowledge system of the subjects taught in the history and social sciences curriculum based on the potential it offers. Its objective is to systematize a didactic conception of environmental education for the teacher in training by assuming pedagogical and didactic criteria of the teaching-learning process by using three levels of systematization as a research method.

Keywords: Environmental education, pedagogical and didactic criteria, teaching learning, knowledge

Introduction

The education professional training requires a competent teacher, with a comprehensive general culture, that allows him / her to use and master the latest advances in science and technology, with solid pedagogical and didactic knowledge, from a perspective of equity and environmental sustainability. that contributes to the fulfillment of objective: 4 of the United Nations Program for sustainable development, which defines: "Guarantee inclusive, equitable and quality education and promote lifelong learning opportunities for all" (UN, 2015).

However, the practicing teacher in charge of guaranteeing and equipping the student with that culture, manifests insufficiencies, which limit their way of acting, in correspondence with these demands.

In educational practice, and specifically in the teaching-learning process of the History and Social Sciences career, a weak presence of the environmental component in the content system of the disciplines and subjects that make up the curriculum is observed, despite of the progress that environmental education has had in Cuba and of constituting this a claim of the international institutions and summits developed since 1948 in Fontainebleau, France, until the Rio + 20 Summit in Brazil.

It is pertinent to develop a coherent work with the purpose of revealing the environmental in the didactics of the curriculum of the career of History and Social Sciences, which overcomes the traditional conceptions and methods of the teaching-learning process and allows to systematize a didactic conception of environmental education in the teacher in training of said career.

Revealing the environment in the career curriculum complements the training of the future teacher, demonstrates the educational potential, which from the point of view of environmental ethics has the knowledge system of these subjects, since it gives a renovating and flexible character to the Social and historical sciences, that is, it allows analyzing the contents from another perspective, according to the difficult times in which humanity lives. For these reasons, the purpose of this article is to systematize a didactic conception of environmental education in the training of the History and Social Sciences teacher.

The peculiarity of the process of shaping the didactic conception is determined by considering three levels of systematization as a research method: a first level consisting of the theoretical preparation of teachers that allows them to assume the theoretical foundations of environmental education; A second level was aimed at preparing teachers through workshops, using the action research method with a qualitative approach, in which they systematized experiences and knowledge that allowed the structural components of the didactic conception to be shaped from an environmental perspective; and a third level of practical theoretical systematization in which the didactic conception was structurally organized. It is at this level that attention is focused and the result obtained is exposed.

Development

The didactic conception of environmental education for the teaching-learning process of the History and Social Sciences career responds to a need for Cuban education, especially the training of professionals in this sector and to a demand from international institutions and events such as It has already been mentioned, since developing environmental education is not only in Natural Sciences, but also in Social Sciences.

In order to relate environmental education with the components of the teaching-learning process, we start from the principles of materialistic dialectics in the man-nature relationship mediated by the category of practical activity. Environmental education is analyzed from a totalizing, comprehensive and contextualized perspective of the concept and its conceptions, as well as the potentialities and limitations to systematize it. It addresses the level of awareness that must be reached to educate in the prevention and search for solutions to the problems posed by society.

In the process of training the teacher of History and Social Sciences, a didactic approach must necessarily be assumed. There are various approaches related to didactic paradigms, but the developer approach to didactics, in accordance with the cultural historical paradigm, is the one assumed in the conception that is presented for its characteristics and the advantages it offers.

The didactic development approach is essential in the integral formation of the individual and particularly of the education professional because they possess an active character, the need for learning to be reflective, critical, meaningful, metacognitive, and motivating. In order to achieve this type of learning, it is necessary that the teaching favors it, through the systemic way that the objectives and contents assume, the use of methods that promote the problematization of the knowledge system, decision-making, research, and also , that the evaluation allows evaluating the comprehensiveness of the students' training.

The results achieved in the improvement of the teaching-learning process, with respect to the preparation of teachers, on the quality of learning and in the formation of the student's personality, have demonstrated the effectiveness and relevance of this approach with respect to others assumed in educational practice.

This research assumes the definition of a developer approach teaching-learning process as: *“It is the institutional educational process that organizes and structures teaching in a more systemic way in relation to the way learning should occur when propitiating, as in no other moment, direct educator-learner interaction around the essential relationship, guaranteed by the educator, that occurs between the aims of education (objectives) and the precision of the contents thanks to the intervention of the components that contribute to the dynamics of the process (methods, means, forms, evaluation), this structure in general, through whose operation it is possible to achieve education linked directly to a certain content of the specific sciences, expressed in plans and study programs”* Pla López, R ., Ramos Bañobre, J., Arnaiz Barrios, I., García Gutiérrez, A., Castillo Estenoz, M., Soto Díaz, M., (...) & Cruz Dávila, M. (2012).

The assumed definition constitutes the guide that allows structuring and harmonizing the components of the process that will guarantee the internal dynamics between teacher-student, student-student in relation to the objective and the selected content.

Starting from the laws of didactics that specify the necessary relationship between the teaching-learning process and the life in which the education of students unfolds and the relationship of the components of said process, the environmental constitutes content of education general, which is contextualized in the disciplines that make up the curriculum of History and Social Sciences, as it acts as a catalyst for the educational process.

It also allows students to form and develop values of solidarity, cooperation, respect and protection towards the environment and strategies are drawn up that influence the reduction of new environmental problems from the irrational productive practice carried out by man, or that is, it is pertinent to educate to develop the capacity to satisfy the needs of current generations without compromising the capacity to satisfy the needs of future generations.

To achieve this transformative vision of the new generations, but environmentally sustainable, it is necessary that, from the didactic point of view, the didactic components are related, from a proper diagnosis, the objectives are specified, the contents are selected, methods are used and means, it is evaluated from objectives that direct environmental education as a general content of comprehensive education. These necessary relationships that constitute law, acquire a new dimension. First, because they must reveal the professional, that is, how they

will act when they are training their students and second, because they are disciplines in the area of Social and historical sciences in which the axiological and ideological factor is decisive for understanding of the political and class character of the approaches to environmental education.

When the didactic principles are attended to, it is necessary to take into account a conception of environmental education that the teaching-learning process must promote the rise from the concrete to the abstract in the learning of the students, that is, make evident the development of actions in the student that allows him to discover the essence of the environment, through its manifestations, in the relationships established between the knowing subject and the object of knowledge, mediated by the practical activity he carries out, which contributes to the formation of new knowledge, concepts and values in this regard.

The teacher must attend to the conscious and active nature of the teaching-learning process through the intentionality of the objectives and the development of activities in which the students reflect, assess, provide solutions on environmental problems, reflected in the prioritized cross-cutting themes of environmental education and that they have their origin and ways of focusing them on the own knowledge provided by the disciplines of History and Social Sciences, which must be planned by the professors of the degree. The professional approach that is achieved in the teaching-learning process is significant since the student must be aware of what they do in their training, which must be reverted to a new way of acting.

The teaching-learning process acquires a scientific character when the teacher starts from the integral diagnosis of the students to verify the deficiencies and potentialities that they possess regarding environmental education, and consequently to plan the system of activities to be developed, to enhance their active character in the solution of its deficiencies. If the advances that occur daily in the field of science and technology and the terrible effects of neoliberal globalization are considered, the diagnosis must be constantly updated, also considering the influence that social factors have on it. This diagnostic conception allows to determine and formulate the objectives that guide the teaching-learning process and focus its attention on environmental education as a content of comprehensive education that is contextualized through the knowledge of the disciplines of the History and Social Science curriculum.

By relating environmental education with the personalized components of the teaching-

learning process from a didactic developer approach, the didactic conceptions that are related to the object of study of the Social Science are overcome, so that if these contents of general education are they approach with a total, comprehensive and contextualized approach in the teaching-learning process, it must contribute to the cultural formation of the future professional, which prepares him to reorient the behavior of man in his social, economic and cultural political relations with respect to the environment .

The contents are the what of education, they constitute the indispensable means for the education of the individual, so it is necessary to assume selection criteria for those contents of the disciplines from a total and contextualized approach that enhance behavior and a certain level of consciousness, development of habits, skills of respect and identification of the values of the teaching-learning process of History that can enhance environmental education. protection of the environment. The contents must be selected based on the potential they possess to educate environmentally, and considering the specific environmental situation of a region or locality, to link the relationship established between man-environment-society. Therefore, assuming content from an environmental perspective requires overcoming the traditional schemes of this component, and approaching these environmental problems, to achieve interdisciplinary and development: of attitudes, skills, values and adequate citizen training in students, as well as a way of acting for the teacher in correspondence with the transformations that are required in these times.

The structuring of the contents when they are penetrated by the environmental axis, they need a level of contextualization from identifying local, regional and global environmental problems, to determine the instructive, educational potentials and the conceptual (knowledge), procedural (skills) and attitudes (values and standards of behavior).

From this didactic approach, it is not enough to make an adequate selection of the contents to ensure success; In this, the appropriate selection of methods plays a transcendental role. The methods create a communicative and socializing environment of appropriation of an appropriate conduct on the environment, and encourages the student to develop a dialectical thought that allows understanding of the environmental problems of the contemporary world.

The new conception of environmental education in the professor of History and Social Sciences is important to assume the contexts of action of the students as a source, to reproduce

and produce knowledge.

Assuming the sources from the perspective of environmental education, requires using all the latest in society, economy, development and environment, audiovisual media and all contexts of student action: school, family and community; that is, the source criteria is broad and diverse. It is to consider the environmental from the perspective of totality as a source of knowledge.

The evaluation from the perspective of environmental education is procedural, systemic, has a qualitative and methodological character, where it is evaluated: the teacher, the student, the group and the levels of assimilation of the content by the student; it is a process of self-evaluation and co-evaluation.

Relating the environmental component with the components of the educational process from a developer perspective, allows to broaden and enrich the conception of the teaching-learning process and especially the class. Therefore it is a contribution to the systematization of environmental education in the teaching of Social Sciences and History.

Structuring of the didactic conception of environmental education for the teaching-learning process of History and Social Sciences:

The structure of the didactic conception includes the guiding ideas, the didactic requirements, the precision of the formulation of the objectives of the disciplines History and Social Sciences, the selection of the contents, the integrative tasks of the students, and the methodological procedures that they must consider teachers.

All these structural components of the didactic conception were the product of two levels of systematization carried out previously; that is; they are the result of having assumed theoretical foundations of environmental education that, contrasted with the practice of teachers, produced new knowledge that at this third level of systematization acquires coherence in the form of a didactic conception.

The guiding ideas

In the reflection with the teachers, guiding ideas were proposed that should guide the didactic

conception of environmental education, and in a systematization process, they were formulated as follows:

Environmental education is a general content of the integral education of students that must be contextualized to the teaching-learning process of the History and Social Sciences career from the study of the relationship between the knowledge systems of the disciplines with cross-cutting themes prioritized environmental education.

A didactic conception of environmental education for the teaching-learning process of the History and Social Sciences career needs to assume the theoretical underpinnings of the didactic development approach and reveal them in its structural components.

A didactic conception of environmental education for the teaching-learning process of the History and Social Sciences career, needs to coherently structure guiding ideas, didactic requirements, reformulate objectives and content of the disciplines based on the environment, plan integrative tasks that solve the interdisciplinary nature and the determination of methodological procedures that ensure an interactive dynamic of personal and personalized components.

The didactic requirements of the conception:

Considering the laws and principles of didactics, the components of the teaching-learning process, from the developer approach and the characteristics of environmental education to the teaching-learning process of History and Social Sciences, the ideas and experiences of teachers discussed in the preparation workshops. In addition, the didactic requirements that allow organizing the teaching-learning activity in the different subjects were specified to achieve the development of environmental education. The didactic requirements were formulated as follows:

Reformulation of the objectives of the subjects to include the intention of environmental education in the teaching-learning process.

Greening the knowledge system of the subjects in order to select and structure them in a way that reveals their relationship with environmental education issues.

Identification of information processing, thinking and professional skills, characteristic of the

teaching-learning process of History and Social Sciences, which contribute most to the development of environmental education.

Identification of the values of the teaching-learning process of History that can enhance environmental education.

Design of the learning tasks that, due to their problem-based, investigative and interdisciplinary approach to the teaching-learning process, enhance the analysis of the role of the environment in the processes: historical, economic, political, social and cultural.

Use of information sources and teaching media that allow analysis of the role of the environment in the study of different historical and social processes.

Evaluation of the environmental contents of the teaching-learning process of History.

In this sense, didactic conceptions occupy a space in these sciences by offering an outline and interpretation of the object that is studied or investigated for its improvement.

What is meant by conception?

According to Valle Lima (2007), they are the essential concepts or starting categories and the principles from a point of view on the research object, as well as a characterization of it, emphasizing those transcendental aspects that undergo changes. Valle Lima, A.D. (2007).

This definitivos constitutes a guiding guide for the purposes of the investigation, starting from assuming laws, principles and categories of Didactics, to build guiding ideas, definitions, specify objectives, content, integrative tasks, requirements, procedures that explain in the theoretical and methodological, in a coherent and systemic way, the way in which environmental education should manifest itself in the teaching-learning process of the History and Social Sciences degree course.

The teacher must attend to the conscious and active nature of the teaching-learning process through the intentionality of the objectives and the development of activities in which the students reflect, assess, provide solutions on environmental problems, reflected in the prioritized cross-cutting themes of environmental education and that they have their origin and ways of focusing them on the own knowledge provided by the disciplines of History and Social Sciences, which must be planned by the professors of the degree. The professional

approach that is achieved in the teaching-learning process is significant since the student must be aware that what he is doing in his training must be reversed in the educational process that he must direct in school.

Considering the systematized teaching requirements and the proposals of the History and Social Sciences teachers in the workshops, a study of the objectives and contents of the disciplines was carried out, which allowed adjustments to be made to guide the teaching-learning process towards environmental education. The procedure used did not transform the objectives and contents of the disciplines, but rather adjustments were made in its concretion to the teaching-learning process.

Methodological procedures

The planning:

Diagnose the potentialities and limitations of students in relation to environmental education, with an emphasis on professional skills.

It is not an independent diagnosis from the one made systematically by the teacher, but rather the environmental aspect becomes a dimension of the diagnosis, so indicators that allow evaluating this content must be included in the instruments.

Formulation of objectives for the subjects, themes and classes in which the intention towards environmental education is revealed.

The objectives should intend to study the contents considering environmental education. It is important to consider the model of the professional and the objectives of the year to make an appropriate referral in relation to the final aspirations and the level to be reached in each year.

Select the contents and make evident, in its structuring, the role of the environment in the analysis of the processes being studied.

The teacher makes the selection of the contents that are specified in knowledge, skills and necessary values that ensure compliance with the proposed objectives, which are related to the prioritized crosscutting themes of environmental education. The selection process should include the analysis of local, national and global environmental problems, depending on the discipline being studied.

The concepts and essential aspects of the processes and phenomena that constitute interdisciplinary nodes that establish the links to understand the causes and alternatives for the solution of environmental problems are very important. Determine the methods that promote environmental education.

The methods must have a problematic and interdisciplinary approach, which stimulate the active participation of each student so that they can set goals for their self-study, investigate and identify: the main local environmental problems, the causes that have originated them, and project strategies for solution or mitigation.

Design teaching-learning activities in which the environmental content is considered, sources and means are used that reveal the analysis of environmental problems and specify the selected method.

Design the evaluation system in which the environmental contents are included.

The execution:

At this stage, the concept of environmental education is specified and systematized, which requires adequate preparation and planning by the teacher and a guiding basis for the actions that students must carry out in the teaching-learning process to fulfill the proposed objective.

Guide and motivate: the teacher, through previously elaborated questions and problem situations, motivates and guides students towards the objective and the new content under study, emphasizing the elements of environmental education of the objectives and contents.

To develop the activities of the class: the teacher guides the basic and complementary bibliography and the independent work to be carried out by the students during the activity, he carries out the historiographic criticism and the clarifications of those approaches, or terms that are difficult for the students to understand; It presents them with problematic situations of the content of the subject related to environmental education, in which students must carry out operations of logical and historical thinking in search of the solution, stimulates the development of communication skills between teacher-student, student- student. The student, aware of the intention of environmental education, locates the information contained in the

targeted bibliography, processes it through content sheets and summaries, and then performs: interpretations, extrapolations, comparisons, evaluations, assumes positions and socializes with his companions the main aspects of environmental content.

The communication that develops between teacher - student, student - students in the teaching-learning process, ensures that the student can: observe processes, identify environmental problems, compare facts, assess and communicate.

In addition, it contributes to forming environmental protection values, respecting biodiversity, living in and with the ecosystem.

To attend differently to those students who, according to the diagnosis, need a certain level of help.

The teacher provokes reflection and debate by posing new questions and problem situations about the role of the environment in social historical development, of a higher level and complexity; the student assumes positions that are solved with or without the help of the teacher.

Control and evaluation:

1. Systematically control the environmental learning process.
2. The teacher controls and records the participation of the students in the development of the activities based on the quality and rigor of the responses: the processing of the information, the evaluations made, the level of application of knowledge to new situations and the positions assumed with respect to environmental education.

Evaluate the process resulting from environmental education.

The teacher values student progress and encourages results. Students take an active role in evaluation through conscious co-evaluation and self-evaluation of the indicators that allow environmental content to be evaluated.

Figure

1



The systematization carried out allowed making several proposals and to illustrate two of them are exposed:

Political Economy Discipline

General objectives:

To argue that capitalist accumulation constitutes the genesis of the contradictions of the current world and of environmental problems.

Arguing the anti-human and predatory nature of the environment derived from the exploitative and alienating essence of the capitalist system based on its fundamental economic features, contradictions and basic economic trends.

To characterize imperialism as the highest and last phase of capitalism, exacerbating contemporary environmental problems, based on the Leninist conception of said system,

considering its economic features and its historical place.

Knowledge system:

The original accumulation of capital and land management. Capitalist mercantile production and its irrationality. The production of surplus value at the expense of the exploitation of workers and natural and environmental resources. Inhuman and predatory nature of the environmental aspects of capitalist production relations. Capitalist competition and environmental balance.

Discipline History of Cuba

General objectives:

Assess facts, processes, personalities and the environmental situation of national history in unity with local history from Aboriginal communities to the present day.

Link the historical content and environmental education with the thoughts of José Martí, Ernesto Guevara and Fidel Castro.

Knowledge system:

The settlement of Cuba, influence of the environmental variable in the main aboriginal settlements. The characteristics of aboriginal communities. The fundamental economic activities such as food security and the sustainable management of biodiversity, their working instruments based on their land management classifications. The ecological footprint left by the aborigines as an expression of environmental identity and local cultural heritage.

The clash of two cultures with uneven development. Impact on Europeans of Cuba's landscape biodiversity. Impact of the process of conquest and colonization of Cuba from the environmental, economic, political, social, cultural and demographic perspective. Entrustment and land management.

Conclusions

The didactic conception of environmental education in the professor of History and Social Sciences is based on the developer approach of Didactics that is contextualized with the theory

of environmental education in relation to the characteristics of the content of the career disciplines and is structured by guiding ideas, didactic requirements, proposal of objectives, contents, integrative tasks and the methodological procedures of the teacher.

Bibliographic references

Pla López, R. (2012). Una Concepción de la pedagogía como ciencia. La Habana, Cuba: Pueblo y Educación.

Valle Lima. A. (2007). Metamodelos de la investigación pedagógica. La Habana, Cuba: ICCP.