

Pedagogical Guidelines for the Elaboration of an Educational Planning in Environmental Education in the School Scope in the Framework of the Key Competences

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ABSTRACT

This article focuses on the need to carry out a new approach to Environmental Education in primary education classrooms that is connected with the acquisition of the competences that students must achieve taking into account the recommendations made from various international forums and that impact on the development of an environmental culture in society. Due to the lack of training in Environmental Education of teachers, the author carries out a proposal of pedagogical guidelines to develop an educational plan of Environmental Education in the field of Primary Education.

KEYWORDS

Environmental Education; Primary education; Key competences; Curriculum; Pedagogical Guidelines; Environmental Values

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Introduction

Environmental Education in the field of Primary Education is a necessity to achieve a true environmental culture. In these terms, the various international congresses held on Environmental Education have been manifested. For this, it is necessary to develop a new approach from the levels of educational administrations that includes this subject in the disciplinary curricula and that is directly linked to the acquisition of the competences that all students must achieve at the end of the educational stage.

On the other hand, the teaching practice must include projects and educational plans of Environmental Education. Given that a deficit of teacher training has been detected in Environmental Education, we outline a series of

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pedagogical guidelines to take into account to implement an Environmental Education plan.

Concept of Environmental Education

At the International Congress of Education and Training on the Environment held in Moscow in 1987, the proposal for an international strategy for action in the field of Environmental Education and Training arises (Delgado, 2014). In the conclusions of the congress environmental education is defined as a permanent process in which individuals and the community become aware of their environment and acquire the knowledge, values, skills, experience and will capable of making them act, individually and collectively, to solve the current and future problems of the Environment. On the other hand, the foundations are laid for the access to information from the educational sphere; research and experimentation; educational programs and didactic materials; staff training; technical and vocational education; education and information to the public; general university education; training of specialists; international and regional cooperation (Muñoz, 1994).

Environmental Education in Primary Education: a new approach

Given the characteristics of the evolutionary development of primary school students, in which the interests of these students part of their closest reality, we are facing a very favorable stage for the implementation of an educational process that aims to develop of the scientific competence that entails the acquisition of interests, knowledge and skills referred to Environmental Education. In the primary stage, the foundations of environmental education are placed, which are essential to promote an authentic environmental culture.

That is why the so-called Earth Summit held in Rio de Janeiro in 1992 focused on the promotion of education, training, and awareness; It establishes three program areas: The reorientation of education towards sustainable development, the increase of public awareness, and the promotion of training.

As a consequence, at present, it is necessary to carry out a modification in the approach of environmental education from the school in such a way that it exceeds a mere statement of didactic objectives and move to a new approach based on ecological criteria. That is, it is not enough to teach from nature using it as an educational resource, it is about educating for the environment, presenting and assimilating a series of environmental values towards the environment, not just knowing it (González, 1996).

Environmental Education from the framework of key competences

Key competences are one of the fundamental aspects of the curricular approach of educational systems that is increasingly being imposed in more developed countries as a result of different actions carried out at international level such as the European Commission of Education (Piñero, Pulido and Falcón, 2017) based on the Delors Report (UNESCO, 1996). It is defined as a "know-how" transferred to a diversity of academic, social and professional contexts. The competence integrates a series of factors such as practical skills and conceptual knowledge that, together with motivational, ethical and attitudinal elements and another of a social nature, are associated with the objective of achieving effective action. The teaching by competences does not

imply a change in the curricular elements of the subjects. It is rather a methodological change in which it is required that, in this particular case, the teacher of experimental sciences and life, acquire didactic strategies to implement this type of learning (Del Espino, 2017). In the specific case of scientific competence, it can be affirmed that they provide a better knowledge and responsible interaction with the physical world through actions oriented to the conservation and improvement of the natural environment, necessary for the protection and maintenance of the quality of life.

In relation to the knowledge, skills and attitudes essential to achieve related to this competence, institutions such as the European Commission establish that knowledge must encompass basic principles of nature, as well as an understanding of the impact of science and technology on the nature; in terms of capabilities, it refers to the ability to use and manipulate technological tools and machines; In relation to the attitudes to be developed through this competition, it is worth highlighting the interest in ethical issues and respect for safety and sustainability (European Union, 2005).

Curricular contents of environmental education in primary education. Environmental values

Recent studies such as that of Litina, Moriconi & Zanaj (2016) show that individual environmental attitudes and values are determined in part by a cultural component. The cited team affirms that culture has a persistent and statistically significant impact on environmental values. These results imply that in view of the environmental problems that require collective action, such as environmental education, it is especially important to understand the driving forces behind the formation of an environmental culture that is fundamental for the effective formation of policies. In this sense, it is necessary to implement environmental values through the inclusion of these in school curricula.

All teacher planning should aim to promote greater environmental awareness to reduce the amount of waste generated, a more active citizen involvement in its management and promote a more sustainable model and respectful of the environment.

Next, we will expose the basic structure of an Environmental Education intervention in the school environment.

Basic elements of an educational intervention in Environmental Education. Pedagogical guidelines

First of all, the frame of reference is located in the so-called Delors Report (UNESCO, 1996) and in the four pillars of education: learning to be, learning to live together, learning to know and learning to do with the objective of promoting integrated development of education initiatives for the conservation of natural resources and the promotion of sustainable development in citizenship.

To ensure that the educational center carries out a global approach to environmental education, it is necessary to address it from the four dimensions of the school environment: from the normative baking of the centers themselves, from the internal environment of the center, from the participation of the

families and from the establishment of relationships with institutions outside the center (JSCA, 2016).

A planning in school environmental education should address the following dimensions: participatory research, sustainability and global change, conservation of biodiversity and natural spaces. The teaching and learning process focused from these four dimensions should have as goals:

- Develop an environmental education program from a comprehensive perspective.
- Integrate Environmental Education in the educational community of the center.
- Develop the environmental education of the educational community.
- Prepare teaching materials.
- Prepare improvement proposals with the aim of improving attitudes towards the environment.
- Develop research projects in environmental education that support the development of environmental education.
- Create collaboration networks with other centers and institutions in order to share materials.

From the methodological point of view, an educational proposal in the field of Environmental Education must take into account the following aspects:

- To achieve the implementation of a systematized and comprehensive environmental education plan, it must be the result of prior planning that includes an improvement and self-evaluation plan.
- To develop an educational action within the scope of Environmental Education in an educational center it is necessary to carry out an analysis of the context and natural environment in which the educational center is located; this will facilitate the approach of objectives to be achieved.
- As a basic methodological principle, it is necessary that the educational project be a motivating element for the students, therefore, it would be convenient to start from their previous interests and ideas.
- Another essential aspect in environmental education planning in primary education should be that the environmental project is inserted integrally into the center's curriculum; In this way, environmental education will be inserted in all the curricular disciplines and in the rest of transversal plans and programs that the educational center is developing.
- The development of cooperation work formulas among teachers that allow the necessary synergies to improve subsequent planning.
- The inclusion of the entire educational community, that is, families, students, external public and private agents.

Teacher training in Environmental Education

The training in Environmental Education of teachers is insufficient as shown by various investigations (Chrobak, Prieto, Gaido and Rotella, 2006, Magaña, 2012, Cardona, 2012). Specifically, like that of Chrobak, et al. (2006) conducted an investigation with teachers of Primary Education to identify their motivations and attitudes about the teaching of Environmental Education. The results showed that they have insufficient preparation and as a consequence the

students found enormous difficulties to achieve the objectives established in Environmental Education.

In this sense, it is necessary to establish training plans for teachers oriented in the acquisition of developing appropriate strategies to teach environmental ethics, each teacher should become familiar with the strengths and weaknesses of each approach, their own abilities and the need for greater theoretical and practical training and the needs of students and nature (Caduto, 1984).

Conclusions

It is necessary to carry out a new approach of Environmental Education in the school that is contemplated as a generalized project to a whole curriculum and within an environmental paradigm and related to sustainable development, within a transversal design, it is a very recent, that, therefore, have only had or will have occasion to apply educational reforms that are also. Until now the priority approach to the environment has been informative (González, 1996).

However, there are many limitations to developing a comprehensive and well-planned Environmental Education program and integrating it into the general curriculum; the most prominent of these is the need for teacher training. Based on the results obtained in various investigations, it is proposed to design a training program to improve and update teachers in Environmental Education (Magaña, 2012).

Disclosure statement

No potential conflict of interest was reported by the authors.

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